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January 2000

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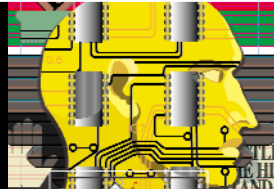
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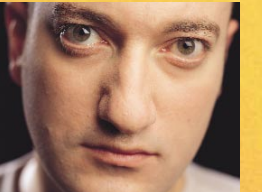


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read me first

Simon Jary, editor-in-chief



The Mac is great, because its once-innovative interface – the desktop dressing that hides all the ugly code – is intuitive and easy to use. Or rather, it's more intuitive and easy to use than DOS was. The really important part of the term 'user interface', however, is the word 'user' – an interface is nothing without its users. By the same token, most businesses are nothing without users, either – Apple especially.

Breaking things down further, the first part of the word 'user' is 'u'. Sometimes 'u' is silent, as in 'colour', 'flavour', etc. When pronounced, however, 'u' suddenly becomes 'you' – an entity Apple seems to have forgotten of late. The importance of 'u' and 'you' is that Apple looks very much like it has abandoned the pair of them over the last two months. Whether it has or not is irrelevant: when trying to expand its market share, any company relies on what its actions 'look like' to its potential new users.

In October, we learned that Apple had pulled out of its own and only UK Mac show. Exhibitors and customers alike – you, in other words – were up in arms. Even Apple UK knew there was no excuse – it refused to issue a press release, and did an ostrich impression while the complaints were flying.

Then, in November, Apple admitted that from Mac OS 9 onwards there would be no British-English version of the Macintosh operating system. Spell-check dictionaries and the UK keyboard layout are not affected; these are still customizable to our quaint British ways. But, from now on, when we turn our computers on, 'colour' will be 'color' and 'Favourites' will be 'Favorites'. The brave British 'u' is exiled from the Mac OS, never to be seen again. Maybe Apple's Internet search engine, Sherlock, will be renamed Columbo in OS X...

This has wound a lot of Macworld readers up. See www.macworld.co.uk/ukos. I'd like to calm people's nerves a little. Just how many times did pre-OS 9 versions of the operating system mention these now u-less words? In its menus and dialogue boxes, Mac OS 8.6 mentions the word 'colour' just once – where you chose your 'Highlight Colour' in the Appearance control panel. If Apple had been clever, it would have changed this singular mention to 'Highlight Shade' or simply left the description as 'Highlight'. No one would have noticed that banishment of 'u'. And 'Favourites' is mentioned a grand total of three times anywhere on the Mac OS – and two of those are hidden in a pull-down in the Network Browser.

It's not all 'u', of course. The Help Centre will be redubbed the Help Center. But that's used even less than Balloon Help! Apple could have gone back to calling it Help – again, no one would have noticed. And, horror of horrors, the

Wastebasket becomes the Trash. For some unknown reason, the British are almost inconsolable about its long-deserved demise. Readers will remember (December 1998) that I personally pleaded with Peter Lowe, Apple's director of worldwide product marketing for the Mac OS, to waste the Wastebasket. The icon doesn't look like a wastebasket, and the long name is cumbersome when moving icons around.

Maybe, we need to re-investigate the whole notion of 'desktop' computing. Do we need the metaphor any longer? Or is it now an integral part of the Mac's legendary 'personality'? Without it, would the Mac lose our love, and, later, custom? Adults are clever enough to aim dud docs at a 'Delete' icon; and since when did children use a wasteba... trash can, anyway?

Because the keyboard layout and dictionaries remain British, I personally can live with this new version of the Mac OS. But it clearly isn't ideal. Potential new Apple customers – even borderline OS upgraders – will hear the Mac uses American spellings, and turn to Windows – which hasn't suddenly changed and alerted the world to its US bent. All this despite the fact that, apart from the four missing 'u's and the Help Centre, OS 9 is just as fond of Blighty as Mohamed Al Fayed, Stuart Pearce and Mac OS 8.6.

I have questioned several key Apple managers on this issue. None could answer, to my satisfaction, my query on how much time, effort or cash it would have taken to change those four misspellings. Apple says it gets us the OS quicker, but *très différent* French, German and Japanese versions hardly trudged onto the shelves.

What stings is not so much Apple's switch – so minor that we can all surely live with it – as the way the company labels the "non-US" versions of its OS. There's US-English and International-English, but the faux International English is exactly the same as the US version (bar the dictionaries). On the whole, British-English is used by Brits, Aussies, Kiwis, Canadians, South Africans and the English-speaking citizens of most Commonwealth countries.

Surely, then, Brit-English is the true Int'l-English – not US English. Yes, Steve, Americans are in the minority on this one. So, regardless of how minor a point the odd 'color' makes, this is another example of Apple failing to get its message across without upsetting its customers. Microsoft upsets the world – yet its users appreciate it. Apple today is getting too adept at upsetting its users, who once worshipped it. Apple has unwittingly made the whole trivial issue into a war between them and us – or, in this case, us, 'u's and the US. MW

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107 competition



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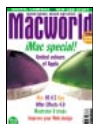
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Macworld

On The ultimate reference guide and news source for the Macintosh market.
Off

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- New User
- New Group
- Open
- Duplicate
- Delete



More winners, more great prizes

Congratulations to Mr S Sullivan, of Surrey, who won the Mygate iBook competition from October's *Macworld*.

There were even more lucky winners – who cashed in on October *Macworld's* Jackpots:

Adobe InDesign: the five winners are:

Tony Merryfield, East Sussex; Stuart Daniel, London; Steven Wilson, London; Alan Bamber, Manchester; and Rob Kessler, London.

Hewlett-Packard DeskJet 970 CXi: well done to Peter Aldington, of Buckinghamshire.



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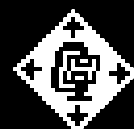
Macworld

Exclusive! QuarkXPress 4.1 updater and playable demo of Championship Manager! Plus Tomb Raider III demo, a slew of updaters for Mac OS 9 and the usual selection of shareware. Santa Vic delivers...



There's over 835MB on this month's CD...

... and to fit it all, many of the files are self-extracting archives (.sea). To access them, simply double-click on the icon and navigate to where you would like the files to be placed on your hard disk.



Install Me Before you start working your way through the software on our CD, go to the System Utilities folder and make sure you install the following:

■ **QuickTime 3.0.2**

Many of the demos need this installed. It gives you QuickTime 3.0.2 plus the MPEG, VR, Musical Instruments and PowerPlug add-ons.



■ **Acrobat Reader+Search 4**

Install this version to be able to read many of the on-screen manuals.

■ **Stuffit Expander and DropStuff**

Versions 4.5 & 5.1.2 are included.

■ **Also included**

A number of useful utilities such as Apple Game Sprockets 1.1.4, InternetConfig 2.0 and Apple Appearance, plus essential items such as Apple Disk Copy and Drive Setup.

QuarkXPress 4.1 updater – Exclusive!



Possibly the longest-awaited update of all time, QuarkXPress 4.1 offers a large number of fixes plus improved support for PDF, scripting and Internet publishing. The software upgrade includes an improved HTML filter to convert text from QuarkXPress text boxes into HTML and adds the ability to import HTML into QuarkXPress documents. Building on existing tools to facilitate digital workflow, version 4.1 offers better proofing and placement of PDF files in QuarkXPress documents. An enhanced PDF Filter (v1.4) lets users convert documents into PDF files using Adobe Acrobat Distiller version 3, or import pages from PDF files into picture boxes.

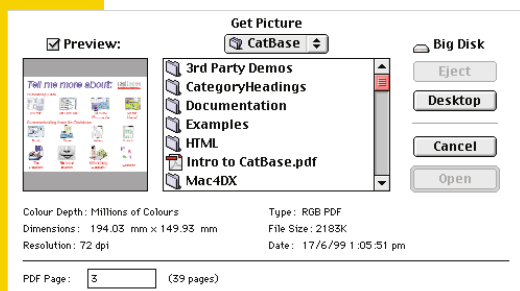
Quark has also introduced QuarkLink, designed to make it easier for customers to receive breaking information about software updates or conflicts, as well as communicate with customer service and technical support.

Quark has also enhanced several features to make page layout faster and easier. Improvements include a new Scissors tool to 'cut' text boxes, picture boxes, lines and text paths, and an enhanced item transformation by duplicating, scaling, rotating and skewing them during step and repeat operations. Optimized guides offer simplified, precise creation of guides; bleed values can be specified independently for each side of a document; and documents can print composite RGB to colour PostScript printers.

Finally, an addition to the File menu gives quick access to recently opened documents and customized default folders for text, pictures and documents. Also included on our CD are a dozen free and over 50 demo third-party XTensions along with the latest necessary system items such as ColorSync (plus profiles), OLE and POCE.

Make sure you read the Release Notes.pdf and Updater ReadMe.pdf Acrobat files before updating your application.

Read our exclusive XPress 4.1 tutorial on page 82.



More CD contents on page 12

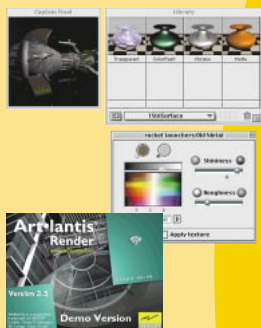


Serious Software

ACTION Menus 1.0

ACTION Menus is the easiest, most powerful and convenient way to organize, customize and control your menus. It enhances the look and feel of normal menus by giving you the ability to add your own custom menus and by adding features to make you more productive.

Take control of the contents and organization of your Apple and Applications menus with a default set of custom menus that give you access to your most recently used and/or favourite documents and folders. ACTION Menus' Multi-ACTION commands let you select multiple items to be launched, opened, quit or to get info on. Best of all, ACTION Menus allows you to assign keyboard shortcuts to items in your menus even allowing you to replace existing command keys. Check it out for 30 days, courtesy of *Macworld*.



Art-lantis Render 3.5

Art-lantis allows you to preview and adjust 3D scenes in real-time and render photorealistic images. It combines an easy-to-use graphical interface with high performance in ray-tracing and application of textures. Functions include: real-time preview of lighting effects; real-time preview of texture mapping; real-time preview of your movies; 3D shaders; 2D and 3D background images; raytracing preview in real-time; and 3D atmospheric effects. Fully functional but save-disabled.

Mac OS 9 updaters

Included on this month's CD are over 40MB of updates and utilities specifically for Mac OS 9. These include:

Commercial

Adobe Type Manager 4.5.2
Adobe Type Manager Deluxe 4.5.2
Adobe Type Reunion 2.5.2
DiskWarrior 1.1
Eudora Pro 4.2.2
FAXstf Pro 5.0.4
FlightCheck Pro 3.62
Ray Dream 3D/Studio
Retrospect 4.2
WebSTAR Mail

Shareware

Default Folder 3.0.3
EjectMenu 2.2.1
FastFontMenu 2.2
Finder Chance 1.1
Finder MenuTuner 1.1
I Love Native! 2.1.3
OT/PPP Strip 1.0.5
SmoothType 2.1.1
Snitch 2.6.5
Startup Doubler 2.5.1

Don't miss...

Cool Extras!

IconBuilder 2.0.1
Create your own icons with this Photoshop filter.

1984 Mac-online
Issue 18 of the UK-based e-zine.

Netscape Mac ISPs

Version 4.7 of Communicator
Internet access offers from
Abel Internet, FreeUK and Skymarket.

plus... Many thanks to IconFactory (www.iconfactory.com) for the new set of CD icons



Also on the CD

APPLE (in the
System Utilities folder):
MacBug 6.6
MRJ 2.1.4
Power Mac G4 ROM 1.8.1

COMMS & INTERNET
33 applications including:
Anarchie 3.6.2
MacTuner™ 2.1.1
Stay Online! 1.1

EDUCATION
Seven programs including:
Eng-Italian Dictionary 5.6
The Wordscroller
Vocab 1.5.5

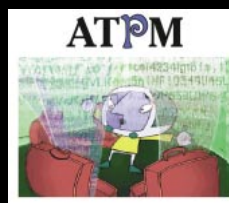
FONTS
FontMoverLite 1.0

GRAPHICS
Five items including:
DeFish 1.5
GraphicConverter 3.7.2



ICON UTILITIES
Icon Machine 2.0.1
IconDropper 3.2.2
IconMacher 1.5.4

INFO
Four items including:
About This Particular Mac 5.11
My Mac Magazine #55
plus seven items for developers



MATHS & SCIENCE
Six programs including:
PowerCalc
The Atomic Mac 3.5.5

NETWORK
IP FileSharing Extras

SOUND & MUSIC
Six applications including:
Ampcaster
FreeMIDI 1.42
PopUpCD 1.5.1
Serial Composer 2.2



UTILITIES
Ten categories comprising
over 60 useful tools for your
Mac including:
Address Book 4.1.3
CDFinder 2.7
CopyPaste 4.4
CropMaker (InDesign)
Euro Assistant Pro 2.1
Excalibur 3.0
FinderPop 1.8.1
OtherMenu 2.0.3
PandoCalendar 5.0.1
PDF-Blit™ 1.02
SetFolders 1.3
SwitchRes 2.2.1
VideoScope 1.1.1

UPDATERS
This month's dedicated
updaters folder includes
over 70MB of patches to bring
many popular applications
bang up-to-date, including:
3D World 3.1
Digital Performer 2.61
Freeway 2.0.3
LetterRip Pro 3.0.7
Norton AntiVirus (11/99)
SoundDiver 2.0.10
Virex (11/99)

Other demos include:

ACTION Files 1.5.1
Data Hammer 2.2.6
NetCloak 3.0.3
OmikronBasic 6.50
PageSentry 2.5.2
Phantom 2.2
Rumpus 1.3.3
SawMill Trial 5.0.6



Shareware

Many programs on this CD are shareware, which means that if you keep them and use them for more than the allowed time (usually up to 30 days) then you must pay for them. Treat shareware as budget-priced commercial programs – support shareware authors so that they continue to provide high-quality programs for the Mac.



Championship Manager – Exclusive version!



At last – a fabulous playable demo of Championship Manager! Select a team and take it from the end of the 98/99 season through to Xmas of the current season.

To install the demo, double-click on the installer and follow the on-screen instructions. The demo requires about 60MB of disk space and has two quickstart files available: “English Leagues” and “English Leagues (Minimum)”. These let you quickly start a new game with a predefined selection of leagues. The latter is a quickstart made with the minimum database turned on and is recommended for anyone with less than 64MB of RAM or a slow processor.

System requirements are: 100MHz PowerPC (200MHz recommended), 32MB RAM with virtual memory set to at least 96MB (128MB real RAM recommended), 800-x-600 pixels (‘thousands’ recommended), Mac OS 7.5 or later.

Any questions or problems? Visit the following Web sites: Sports Interactive Ltd (www.sportsinteractive.co.uk/); Feral Interactive Ltd (www.feral.co.uk/) and CM Fan Club (www.cm3.com/).

Tomb Raider III

Lara's back! This demo includes portions of a level from the South Pacific location in Tomb Raider III.

To run the demo, simply double-click the demo application. The first time the game starts up, it will attempt to detect the right settings for your Mac for best performance. If at any time you want to change the graphics/sound/joystick settings, simply double-click the Tomb Raider III Setup application. To play Tomb Raider III on ATI Rage (Pro or 128), you will need to download and install Apple's OpenGL drivers. You can find these at www.apple.com/opengl.



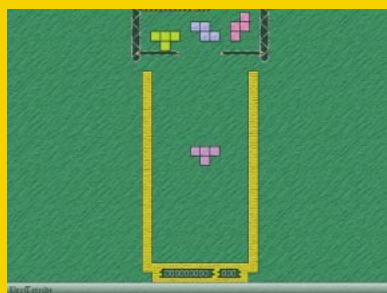
1999 Games Hall of Fame

Three of our ten award-winning games are on the CD: **Championship Manager**, **Deathground** and **Unreal Tournament**. Three of the others can be found on past CDs: **Myth II Soulblighter** (March 1999), **Caesar III** (October 1999) and **Bugdom** (September 1999). Additionally, the main **Starcraft** demo appeared on our Gamesworld CD last May.

Games World

Don't miss this month's Top 10 Shareware games to keep you busy over Christmas and the New Year. There's a variety of puzzles, card games (including the excellent Classic Cribbage), board and dice games.

You'll also find the latest updaters for Brood War 1.07, Bugdom 1.0.3, Deathground 1.2, Starcraft 1.07, Total Annihilation 3.1.1 and version 348M2 of the Unreal Tournament demo.



PerTetride



Classic Cribbage



FAULTY COVER CD-ROM?

If your cover CD doesn't seem to work as it should please check you have read all the instructions on the cover disc pages carefully first. If it still doesn't work, then please email Woody Phillips at woody@macworld.co.uk

If your cover disc is broken and you want a replacement CD, please contact Kelly Crowley, on 0181 831 9252, or at kelly_crowley@macworld.co.uk

Macworld CD catalogue

Courtesy of Mark Pirri's superb DiskTracker program, Macworld brings you a searchable catalogue of all our CDs from 1997 to '99 – over 135,000 files! This will grow month by month to allow you to find any file you want, without wearing out your CD-ROM drive. The latest version of DiskTracker (1.1.4) is also included – don't forget to register if you find our library useful.



Find out about our 2nd CD



CD2

Macworld / GREEN STREET EXCLUSIVE SAMPLER CD!

1,000 Photos!

- Animals
- Entertainment
- Miscellaneous
- Nature
- Our World
- Travel

Getting started with 1,000 Photos

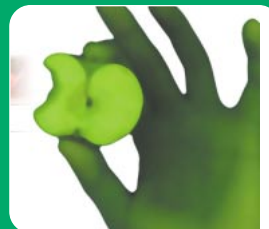
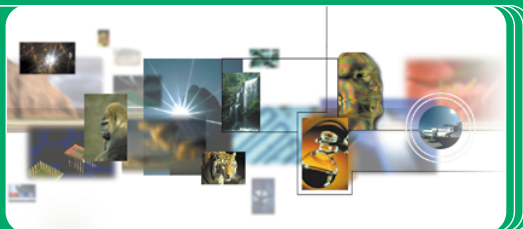
- Copy the Portfolio Browser (inside the *Copy to Hard Disk* folder) to your hard disk.
- Install Acrobat Reader 4 on your hard disk (unless you already have this installed), double-click on *Read me 1st* and read it through.
- Can't be bothered with the Read Me? Want instant results? Double-click on the **Launch Animals** icon. Press Command-K to bring up the Keywords window and double-click on **Bears**. Now double-click on any of the five images to see a full-size version. Close this window and press ⌘-Alt-C to copy the image to your hard disk. Now back to the Read Me...

10,000 Web Art!

- Arrows
- Bullets
- Buttons
- Icons
- Lines

Getting started with 10,000 Web Art

- First, double-click on the **Licence Agreement** and make sure you agree with the terms.
- Then double-click on the **Read Me First** document and read it through.
- Want instant results again? Fire up your Web browser and open *Index.htm*. Click on **Arrows** and select one image on each screen until you get to **Style**. Click and hold on your selection and copy it to your hard disk. Now check **Read Me First**.
- The memory allocation for your Web browser needs to be increased by at least 10,000K.



British English scrapped

Outcry as
Apple trashes
Wastebasket and
Brit interface
spelling

Toodle pip, Wastebasket! Howdy pardner, Trash! The Americans are coming, so have a nice day! Cost-cutting and earlier release dates are the principal reasons behind Apple's decision to scrap the British version of Mac OS 9, a senior Apple manager has told *Macworld*. Apple also claims that the unpopular move (see www.macworld.co.uk/ukos for examples of *Macworld* reader reaction) will result in faster hardware introductions and easier software updates.

Macworld asked Peter Lowe, director of Mac OS worldwide product marketing, why Apple culled the British-English version of Mac OS 9 in favour — or should that be 'favor' — of a so-called "International-English" version.

"By switching the British OS to International-English, we reduce costs and ship the latest versions faster," explained Lowe. During the interview, Lowe also hinted at some forthcoming changes to the Mac operating system.

Lowe denied suggestions that, by dumping the British version, Apple is simply cutting the easiest corner. "Creating a UK English version of the operating system is like making a whole other language," he claimed.

"There are only so many localizations Apple can do," he added. "Testing and qualification take as long as actual code changes, however minor they may be."

Apple UK's senior product marketing manager, Neil Thomas, added that "while it's a matter of semantics, the changes are not trivial". Thomas also claimed that using the Int'l-English version would cut down lead times for hardware introductions and software updates. In the past, UK users would have to wait weeks, and often months, for British versions of system updates and extensions, such as QuickTime. By forcing Brits to adopt the "same language", Apple claims it is "simplifying user choice."

However, the move has not been well received by some UK Macintosh users, who are aggrieved at the "attack" on the mother tongue. Following hard on the heels of Apple's cancellation of its

only UK Mac show, Macworld Online readers emailed their complaints in the hundreds. A sense of sudden rejection pervaded their sentiments: "Apple doesn't have many feet left to shoot at," wrote Joe Gillespie of Pixel Productions in London.

The major differences between the previous British-English and new Int'l-English versions are spelling and icon naming.

The British spell some words — such as "colour", "favourite" and "centre" — differently than Americans ("color", "favorite" and "center"). UK users will now have to put up with the US spellings on their Mac menus. Apple will continue these changes in applications, such as AppleWorks, while bearing in mind "several education issues".

"When users search for the word 'colour', we will direct them straight to any reference to color," Lowe said. "We won't make you re-type the word as we spell it."

Minor changes

Ironically, Lowe was born in Britain — but is a Canadian national, now living in California. He was backed up by Thomas, who said that Apple UK polled "a large group" of British users and found them more concerned with localized paper sizes and date-and-time issues than with "the odd spelling incongruity".

The International-English version of Mac OS 9 is still "fully customizable" to UK keyboards and has standard British spelling dictionaries, if not menu commands, making OS 9 "as usable as previous versions", according to Lowe.

Previously, Brits dumped old documents in the Wastebasket. Now they must get used to throwing things in the "Trash" like their American cousins. Several UK readers have complained to *Macworld* about this cultural garbage shift, as well as Mac OS 9 now referring to traditional British Summer Time as Daylight-Saving Time.

Sadly for those souls, I must claim some responsibility for the trashing of the Wastebasket. When I had lunch with Lowe a year ago I pleaded for the British bin to be thrown out,

in Mac OS 9

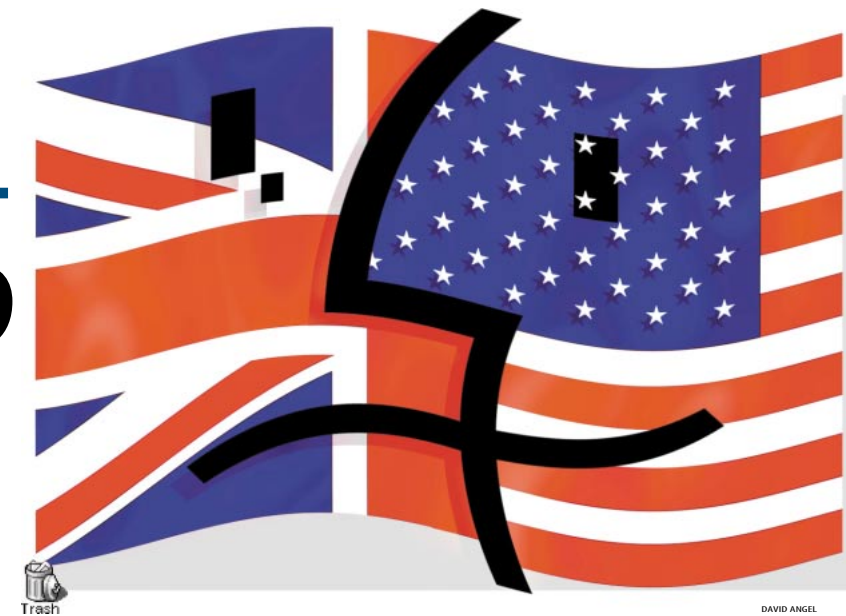
as the alley-way icon is clearly not an interior rubbish-collecting item. Lowe confirmed that our conversation had "sealed the Wastebasket's demise".

During this year's meeting, Lowe ran through the 50 new features of Mac OS 9 and ventured some new facts on forthcoming operating-system changes.

On top of OS 9's voiceprint password, Apple is working with third parties on *Mission Impossible*-like thumbprint readers and retina scanners for alternative data-protection functions.

Referring to the continued existence of the Chooser, Lowe agreed that Apple's printing configuration is "not where we want it today". Refinements in Mac OS 9.5 and OS X will free printer choices from the Chooser to their own dedicated menu, much like Mac OS 8.5's Network Browser.

Apple will respond "very soon" to user requests to make its Sherlock search engine customizable in size, following complaints that it takes up too much onscreen space, particularly on the iMac



(see story below). And Lowe noted that Apple will soon release an Apple Store channel for Sherlock 2. Despite the British-English rejection, Apple's Thomas says that he is planning to encourage more UK Sherlock plug-ins.

"You say 'tomato' and we say 'tom-ay-to'" goes Gershwin's *Let's Call the Whole Thing Off*. That's all changed with US-friendly Mac OS 9 — now we all say "tom-ay-to". But, according to Apple, at least we no longer have to play system ketchup any more.

— **Simon Jary**. Read Jary's opinion on page 5. What do you think, email: letters@macworld.co.uk

Yikes! 350MHz Sawtooth kills older G4 Power Mac

Apple has revamped its 350MHz Power Mac G4 by replacing its old *Yikes* logic board with the faster *Sawtooth* board already found in the 400MHz and 450MHz models. All currently available Power Mac G4 configurations are now based on the faster Sawtooth design.

All three machines now ship with ATI's new Rage 128 Pro AGP graphics cards. And the 350MHz G4 swaps its old CD for a DVD-ROM drive. Processor speeds and prices are unchanged. Read our review on pages 46-47.

Apple Expo 2000 in the UK has now definitely been cancelled. Following its dramatic exit (see December 1999), Apple finally withdrew all rights for the organizers to use the name Apple Expo for the event. "Any aspiration of pressing on without Apple became forlorn", according to organizer Bob Denton.

A series of meetings have been taking place for several weeks between Apple and organizer US Web/CKS in an attempt to salvage

something from the debacle.

Graham Salmons, marketing director of Lexmark told *Macworld*: "It's a joke. Many vendors had put a lot of investment into this and we are desperately disappointed that Apple doesn't think third-party vendors are worth considering. Apple needs the courage of its convictions and meet end-users face-to-face."

Andrew Haji-Hannas, marketing manager at QMS

Apple Expo 2000 cancelled

spoke of his shattered optimism: "Apple has absolutely no regard for its customers or its partners. A show this year would have been a great chance to show off the new products. It sends all the wrong signals to customers."

Andy Eakins, of Hermstedt, commented wryly that Steve Jobs "is proving he's worth every cent of his dollar-a-year salary."

Bob Denton feels that the decision bodes ill for Apple's future: "That people aren't feeling more anger shows the resigned feeling of the UK Apple community."

Apple declined to comment. Visit our special site (www.macworld.co.uk/expoexit) for more stories on the doomed UK Mac show.

MW

Sherlock 2 becomes Moriarty

Apple is stressing the e-commerce potential of its Internet search engine, Sherlock 2, but some vendors are apparently more equal than others when it comes to adding ads to Net searches.

Findings from tests and reports from members of the Sherlock-Talk mailing list show that Sherlock 2 overrides ad banners in third-party plug-ins outside Apple's built-in set. Instead, the software retrieves and displays Apple ads with each search.

This undocumented change means only Apple and a small list of approved vendors can reap ad revenue from searches conducted under Sherlock 2. In contrast, some small Web sites stand to lose money, plug-in developers said.

That exclusionary approach represents a reversal from the original version of Apple's search engine, which first shipped with Mac OS 8.5 in October 1998 and let third-parties include ad data in their plug-ins.

Plug-in authors voiced concern about the effect the new limitations will have on their the bottom line.

Pete Shaw, Webmaster of the Freedom UK Web site in Reading, said: "The default search sites get their own banners displayed, but sites that want to support Sherlock would have to give up their only source of revenue, which is a great shame."

"I love the whole concept of Sherlock

"Space-age look" and ads policy under user attack

and want to be able to offer Freedom UK visitors the ability to search its resources outside the browser," Shaw said, "but I can't see how I can support Sherlock 2 if the ad revenue is being blocked."

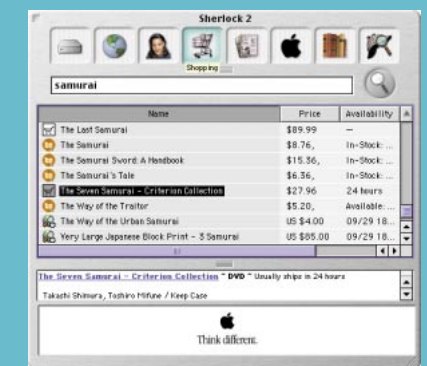
Shaw said almost all of the work on the Freedom UK site is done using iMacs and G3 Power Macs and added: "I feel cheated by Apple because of the changes in Sherlock 2."

Apple was not available for comment. — **Wendy Mattson & Jonathan Evans**

Heavy on metal

What's more, Apple is getting it in the neck about Sherlock 2's interface infringements. Apparently, thousands hate the shiny new look of Sherlock 2 — to such an extent there's now a patch to revert Mac OS 9's redesigned Internet search engine to its OS 8.5 window-and-scroll-bar look.

Designer Raul Gutierrez posted his retro-look on the Internet, and claims that the free Winfix patch — short for Windows Fix — was downloaded over 15,000 times in its first three days. "People are going nuts over this thing," said Gutierrez.



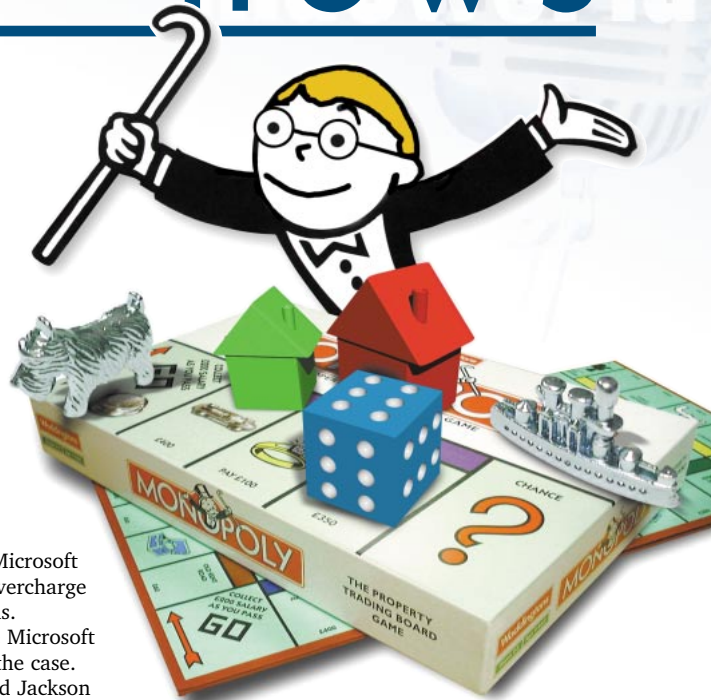
Users are most annoyed by Sherlock 2's inability to minimize its window size by double-clicking in its titlebar.

Apple is under attack for "fiddling" with the sacrosanct Mac interface. Bruce Tognazzini, founder of Apple's Human Interface Group, which set up the company's stringent Human Interface Guidelines for all Mac software developers, accuses Apple's CEO Steve Jobs of messing with the interface: "I suspect you will see a lot more ego-driven design before things get better."

The so-called "space-age" new look of Sherlock 2 and QuickTime 4 is somewhat mirrored in Apple's consumer video-editing tool, iMovie, which is bundled with iMac DV computers. It is rumoured to be used throughout the forthcoming Mac OS X, due early next year.

MW

Microsoft 'guilty' of OS monopoly



Microsoft faces a legal break-up following Judge Thomas Penfield Jackson's 'findings of fact' that Bill Gates and co. used the Windows monopoly to stifle competition. A mediating judge has been appointed to set up a deal between both sides. With Judge Jackson's findings backing it up, the US Department of Justice now holds the upper hand in the massive antitrust action.

The lawman stated: "Microsoft's pricing behaviour is consistent with the proposition that the firm enjoys monopoly power in the market for Intel-compatible PC operating systems." He berates the company for using power "which could be spent reducing price" on "imposing burdensome conditions on customers".

Judge Jackson's 207-page report also discusses the decline of Netscape Communications as Microsoft caused other firms to carry its, rather than Netscape's, browser.

He concluded: "Most harmful of all is the message that Microsoft's actions have conveyed to every enterprise with the potential to innovate in the computer industry. Microsoft has demonstrated that it will use its prodigious market power and immense profits to harm any firm that insists on pursuing initiatives that could intensify competition against one of Microsoft's core products."

Anti-innovators

Jackson accused Microsoft of stifling competitors: "The ultimate result is that innovations that would truly benefit consumers never occur for the sole reason that they do not coincide with Microsoft's self-interest".

Bill Gates replied: "We disagree with a number of the Court's findings, and believe the American legal system will affirm that Microsoft's actions and innovations were fair and legal."

A final verdict has not yet been reached. Judge Jackson has first appointed another lawman, Judge Posner, to try to arbitrate a voluntary settlement between the sides in the case.

"I think this is probably as good a time for any possible negotiated outcome as you could have," says Jackson.

If they fail, Judge Jackson will resolve the issues himself – and this could force a break-up of Microsoft. Microsoft is reeling from a wave of civil lawsuits filed in California, Ohio, New York, Alabama, Louisiana and Florida in the name of millions of Windows users. These seek damages

from Microsoft over Jackson's finding that Microsoft used its monopoly to overcharge for its operating systems.

The civil actions give Microsoft ample reason to settle the case. Should the talks fail and Jackson concludes that the software giant violated antitrust laws, that finding could be submitted as evidence in the civil cases. Should Microsoft settle before the Judge's final ruling, then Jackson's preliminary rulings can't be submitted as evidence in the various civil actions.

The US government also has reason to settle, particularly given the strong opinion expressed in Jackson's findings of fact. Microsoft will appeal if it loses, and an appeals court could take some of the sting out of Jackson's conclusions.

Big ain't bad

Judge Posner, mediator in the settlement talks, belongs to a school of thought in antitrust law called the Chicago school. This shuns the notion that big is necessarily bad, and believes that antitrust cases should focus on economics, and whether consumers have been harmed.

The European Commission is also examining Microsoft with a view to prosecute. A recent IDG news report said that whatever happens to Microsoft in the US case may not meet the requirements of the European Commission.

Legal eagle

If Microsoft appeals, the obscure Antitrust Expediting Act may be enforced. This applies to antitrust actions brought by the US government, allowing the Justice Department to seek immediate review at the Supreme Court. This avoids sympathetic judges from the Federal Appeals court in Washington, who ruled for Microsoft in 1998.

The Expediting Act also stops a party appealing until 'final judgement' is reached – Microsoft cannot appeal until the Judge asserts what remedies should be enforced. Microsoft, it is assumed, would like to avoid this phase so that it can debate points of law in its favour, rather than debating punishments. **MW**

– Jonathan Evans

For more Macworld information on the Microsoft antitrust trial, visit www.macworld.co.uk/antitrust. A full transcript of the findings is at <http://usvms.gpo.gov/>.

Apple: its part in Bill's downfall

Judge Jackson's findings include references to Apple and the Mac OS' roles as competitors to Microsoft and Windows. The competition between QuickTime and Microsoft's multimedia software is there, as well as a report on how Microsoft's Internet Explorer was chosen as the Mac's default Web browser.

Analyst Tim Bajarin of Creative Strategies said recent rises in Apple's stock is due to a "knee-jerk reaction among investors" to Jackson's findings.

"The assumption is that Apple will gain from Microsoft, and that's a fallacy," he said. "There's no question Apple will sell more iMacs, that's because Apple is doing the right thing, not because of any loss of Windows systems. Christmas will show the strongest hardware sales ever."

"It will be business as usual, with no change for at least six to 12 months," Bajarin continued – a final conclusion in the trial could take years.

– Wendy Mattson



Wireless network technology key to Apple's education strategy



Xemplar BETTs on iBook and AirPort

Apple Xemplar is planning to make a big splash with its iBook consumer portable at the UK's annual education and technology show, BETT 2000, at London's Olympia from January 12-15, 2000.

Apple's education wing, Xemplar – winner of the Secondary Equipment award at last year's show – will unveil its Theatre Unplugged. This is Apple's presentation theatre focusing on AirPort wireless networking using iBooks and iMacs.

In July last year, Apple Xemplar was one of 12 suppliers to gain a British Communications and Technology Agency (Becta) accreditation for its National Grid for learning (NGfL)

Managed Services. Becta plans to announce more accreditations in April 2000.

Apple Xemplar's head of marketing, Nick Evans, is confident that a strong presence at BETT will benefit Apple enormously: "We've got wireless networking, the best portables around, the best all-in-ones around, and an accreditation that other major players have failed to gain – all backed up by a dedicated education team."

A host of new Mac hardware and software will be announced at the show.

■ Tag Developments will show its **Jam C@m**, a robust, easy-to-use £59 digital camera featuring a USB interface and image-manipulation software. The company will also showcase SiteCentral Web designing software, which was released on the Mac platform in November 1999.

■ Softease is launching the Mac version of its easy-to-use DTP package, **Textease Multimedia** – which can flow text around objects, change the size, shape and colour of text and graphics, and insert video, animation and audio.

■ Semerc is showing its new Out and About adult-learning CD entitled **Living in the**



Community – Level 1, to be launched next summer. The company is also launching its **Primary Toolkit** suite of educational software for Key Stage 1, 2 and 3, comprising a talking word processor, art package, database and spreadsheet, and software for re-using Internet content.

■ Maths teachers can take a look at Longman's two new CDs entitled **Tomorrow's Promise Maths** for years three and four. Logotron is launching the **BBC Maths Workshop Series** – a set of three CDs mapped to the National Numeracy Strategy.

■ Cromwell Productions launches **The English Civil War – Version II**, an improved version of its best-selling CD title, featuring a new interface and added features. Other titles scheduled for a 2000 release include **The Medieval World** and **The Anglo-Saxon Chronicles**.

■ Other highlights of the show include the BETT 2000 Awards, a Teacher Training Centre, a Library Resource Centre, a Special Needs IT Village and an extended seminar programme offering insight into the key issues surrounding educational technology.

– Louise Banbury

MW

Apple fights back at Dell's #1 education claim

Apple's traditional stronghold in the education market seemed shaken last month, when Windows-PC maker Dell Computer claimed it had pushed Apple from the number-one spot in the US.

Apple promptly dismissed Dell's calculations as inaccurate. According to Apple, Dell had quoted statistics from Dataquest – a research firm that gathers its data from vendor and channel surveys – thereby ignoring direct sales.

Apple quoted IDC's report for the second quarter of the calendar year, which places Apple at number one with 22.2 per cent market share, followed by Compaq with

19.1 per cent, Gateway with 17.2 per cent and Dell at number four with 15.8 per cent.

However, Apple's lead was a slim one of about 25,000 units – a fall from last year, according to IDC analyst Bruce Stevens: "Apple had a much more dominant position [years ago]. As the US market matures, you're seeing larger companies put more effort into increasing penetration into education."

Sixth of the best

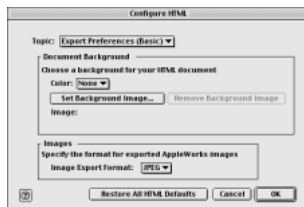
In the UK education market, Apple fell to number six in the third quarter 1999, according to IDC UK, which based its research on the number of units shipped. Research

Machines was top, with the next four places going to Compaq, Packard Bell, Dell and Fujitsu, respectively. In 1998 as a whole, Apple was placed at number three.

Apple's slip in the education marketplace reflected Apple's poor performance overall in the third quarter, according to an IDC UK analyst.

However, Nick Evans, Xemplar's marketing manager believes that Xemplar is still second only to Research Machines. This is based on revenue, not the number of units shipped, and takes into account the fact that Xemplar now supplies libraries and museums, and not just schools and colleges. – LB

MW



AppleWorks 6.0 pours on the new features

Whatever happened to ClarisWorks? Yes, it changed its name to AppleWorks, following Apple's culling of its Claris software subsidiary. But this £69 integrated office suite – shipping for free with iMac and iBook – hasn't been upgraded for over two years. January's Macworld Expo in San Francisco is set, however, to see the debut of version 6.0, according to heavy rumours on the Web. The upgrade – code-named *RainMaker* – will be a complete overhaul of the current suite.

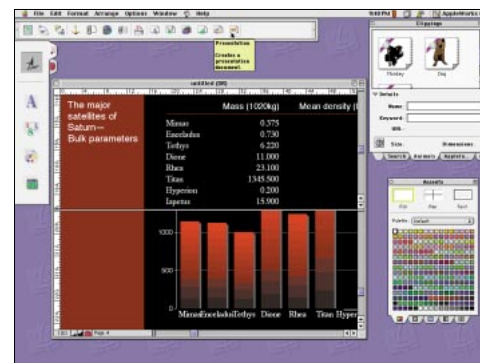
The application has taken a major redesign in terms of its 'look-&-feel'. AppleWorks 6.0 sports Mac OS 9's platinum appearance, with sleek, smooth edges to its floating palettes. It is also Apple's first fully compatible Carbon program, allowing it to run on the forthcoming Mac OS X.

AppleWorks 6.0 is a set of five floating windows that show the path to the six sub-applications. Keeping the traditional tools – word processor, drawing, painting, database, and spreadsheet – Apple has taken another step to matching the might of Microsoft's Office 98 suite by adding a new PowerPoint-like presentations application.

Linksmanship

A major redesign is also evident on the Links palette. 'Anchor' links identify areas that document links go to, 'Document' links to other AppleWorks documents, and 'Internet' links provide direct Internet and Web integration. Users can create folders and subfolders within each tab to sort their many bookmarks. Images can also be saved to most Web standards. AppleWorks 6.0 lets a user switch between the multiple tabs on the same floating palette.

The Starting Points dialog palette opens up when you start-up AppleWorks 6.0. It lets you launch a new document in one of the sub-applications, and gives you access to step-by-step tutorials through an Assistants command. Templates gives you pre-created designs and layouts, and Web lets you access



The (small) business

AppleWorks 6.0 gets its first upgrade since 1997, with an up-to-date look-&-feel, new Presentations application, and increased Internet support.

news, tips and additional templates direct from Apple. Those expecting the inclusion of Apple's Claris EMailer application will be disappointed. Despite a loyal following, Apple seems to have chosen to kill the product rather than revive it.

One of the most powerful new features is the Clippings palette. Users get to gather and sort their images and image clippings via drag-&-drop. You can then search for them by file name or keyword. Clippings also lets you store sound and movie clips. Most impressive of all is AppleWorks' built-in support for seamless QuickTime media integration. You can drag-&-drop movies and sounds into any document.

Another handy utility is the ease with which users can insert spreadsheet documents into other documents – with no loss of cell formatting. Essentially, AppleWorks 6.0 makes it easy to work with mixed media in one application. This opens up the chance to create loaded digital documents, all within the revamped office suite. **MW**

During his keynote speech at the QuickTime Live! conference held in Los Angeles, Phil Schiller previewed new QuickTime 4.1 and Streaming Server 2 technologies.

QuickTime 4.1 includes enhancements to the popular streaming package – seamless ad integration, improved firewall navigation, AppleScript support for digital media creation, and support of synchronized-multimedia-integrated language.

QuickTime 4.1 streams on

QuickTime Streaming Server 2 also features password protection and a plug-in architecture. It now supports third-party analyst tools.

Apple also announced six new QuickTime channels from leading news and entertainment organizations including CNN, which will broadcast round-the-clock newscasts. Other new channels come from Financial

Times, MTV, TV Land, Nickleodeon and tv-radio.com. tv-radio.com, for example, will broadcast content from 50 radio stations and five TV stations in France.

Apple also announced that more than 20 million copies of its QuickTime 4 software have been downloaded since April. QuickTime 4.1 is a free download from www.apple.com. **MW**



Is it a pixel? Is it a photodiode? No, it's Fujifilm's Super CCD tech

Digital-camera science means sharper pictures

Fujifilm has developed a groundbreaking digital-camera technology called Super CCD, using a brand-new pixel arrangement that makes much-higher image resolutions possible. With improved colour reproduction and increased sensitivity, Super CCD cameras will let you shoot sharper, clearer pictures in more diverse light conditions. Super CCD uses completely different pixel and photodiode shapes in a honeycomb pattern, like an insect's eye.

Anti-pixels

Fuji's decision to pursue the new technology is based on its analysis that the maximum number of pixels for existing CCD devices has been reached.

Minoru Ohnishi, President of Fuji Photo Film says: "In the past, the difference between a digital camera with 300,000 to 400,000 pixels and the megapixel model was so conspicuous you could detect it in the printout quality.

"A camera with super mega-pixels offers visible improvements in quality, especially for large prints. But, any future increase in the number of pixels is known to do more harm than good."

He explains: "If pixel increase takes place independent of any change in the size of the CCD, pixels are squeezed into the limited space of the CCD – the per-pixel space shrinks. This negatively affects sensitivity, the dynamic range, and the S/N ratio."

Diode delights

Further increases in pixel numbers decrease image quality, as after a certain point the pixel size must shrink. Super CCD offers a new shape of photodiode and a new pixel arrangement, overcoming these limitations. Photodiodes are located in each pixel. The octagonal shape of each photodiode and the honeycomb pixel arrangement dramatically improves efficiency.



One thing that most computers do poorly, regardless of processor speed or amount of RAM, is create pleasing sound. That's why Apple teamed up with renowned audio-component manufacturer Harman Kardon to create a bit of eye and ear candy to accompany the new iMac DV.

The iSub (above) is a £79 USB subwoofer – a speaker that produces powerful bass sounds – that looks more like a jellyfish than a speaker; this 6-inch device belts out 20 watts of bass down to about 40Hz. And since the iSub is powered by USB, there's no need to plug it into the wall.

However, Power Mac G4 users shouldn't get too excited about the iSub: it's designed to work only with a new iMac.

Harman Kardon built the subwoofer to complement the new iMac's built-in speakers, which it designed. The built-in speakers have an eight-octave range and are smart enough to know when the iSub is plugged in, divvying up the aural workload to create the best sound.

During his recent visit to London (see page 30), iMac designer Jonathan Ive revealed that, while Harman Kardon handled the sounds, his Apple design group catered for the looks. And the iSub is perhaps Apple's most beautiful creation yet.

Apple is hoping to ship the iSub in the UK in time for Christmas, but, as the wait for the Cinema Display continues through to the new year, it's anybody's guess how long we'll have to give this 'glass' a blast.

Will the iSub make it any easier to understand exactly what Bob Dylan is singing? Probably not. But it'll make listening to whatever it is he's singing a more pleasurable experience.

– Jonathan Seff

The area of the photodiode in a 1/2-inch Super CCD with two million pixels is about 1.6 times as large as that in an existing CCD with two million pixels. A two million pixel Super CCD can produce better image qualities than a conventional CCD with three million pixels.

The new pixel arrangement combined with improved signal processing technologies also helps achieve higher resolutions. Super CCD even returns acceptable quality at 2x digital zoom. Skipped read-out of image data happens without sacrificing image quality. A higher shutter speed and a longer flash range are possible, meaning better action shots with megapixel image quality.

MW

– Jonathan Evans

Colourful Comdex in iMac mode

The rainbow-coloured PC cases and translucent peripherals at the Comdex 99 computer trade show in Las Vegas were evidence that Apple's design influence is still going strong.

While Apple itself was not present, there was a generous helping of Macs on the show floor, and USB and FireWire was everywhere at the annual PC gathering in November. More companies than in recent memory were displaying Mac products, and many others were openly discussing a new-found interest in entering the Mac market.

However, the clearest trend to emerge from the show was that the desktop computer's days could be numbered, and the Internet is delivering on its promise to drive a new model of computing.

"Comdex should not exist – it's inevitable," said Scott McNealy, CEO of Sun Microsystems, in his keynote speech. In his vision of the future, the computing world will be ruled by an array of handheld computers, smart phones, TV set top boxes and other devices in which the operating system and software applications become irrelevant to end users.

Compaq unveiled its new iPaq (no prizes for guessing where the inspiration for that name came from...), a simplified computer designed for quick and easy access to the Internet. Dell has also copied Apple's iMac strategy with its recently announced floppy-less Webpc consumer desktop.

Compaq expects to see sales of Internet appliances ramp steeply in the the next two to three years. Jerry Merkatz, vice president of Compaq's Internet appliances division, seemed to be echo Apple in his 'thinking different': "It's really going to be driven by the consumer, rather than by the traditional pillars saying: 'This is the way it's going to look and operate because this is the way it's always looked and operated.'"

Macs in on the act

A host of third-party developers were showing new products that work with the Mac, including monitors, drives, accelerator cards and other hardware. Iomega introduced the **ZipCD** external USB CD-Rewritable (CD-RW) drive that lets customers record, create, share and archive



Nice try, PC guys

Windows-PC makers have a go at imitating the rainbow range of iMac colours, but can't seem to get away from that old beige-box concept.

up to 650MB of data on a CD. The ZipCD external USB drive begins shipping for the Mac "sometime" in the first quarter of 2000. Iomega also announced at the show that it's developing a FireWire version of the Zip 250MB drive, expected to ship by mid-2000.

Simple Technology (01355 572 850; www.simpletech.com) introduced an £899 Mac-compatible **320MB CompactFlash card** – the highest capacity Type II card available – for use with digital still cameras, MP3 players, handheld computers and other portable devices.

I-Jam Multimedia (www.ijamworld.com) said its \$299 IJ-101 portable **I-Jam MP3 player** is now compliant with USB standards and the Mac. It uses a storage drive called the Jam Station and transfers MP3 files onto a multimedia card. The I-Jam player measures only three inches high and less than two inches wide. And, of course, it's available in blue, red, silver, yellow and black.

– **Wendy Mattson & Macworld staff**

MW



Apple's Bondi Blue-print steals the Lime-light at giant PC show

Dragon dictates voice tech on Mac

The long wait for continuous-speech-recognition software on the Mac may soon be over. At Comdex, Dragon Systems offered the first public demos of NaturallySpeaking for the Mac. The software has some rough edges, but the core technology appears to be working.

Unlike earlier forms of speech recognition, Dragon's continuous-speech technology lets you speak at a normal pace instead of pausing between words. IBM will also bring

its own continuous-speech software, ViaVoice, to the Mac.

Dragon engineer Adam Weiss fired up the company's new Mac-based word processor and spoke several sentences that appeared accurately on the screen. Then, using only voice commands, he selected text and changed the font size and type style. He also demonstrated the software controlling Apple's SimpleText and AppleWorks programs. NaturallySpeaking will work with

other Mac software as well, Weiss said, but with most programs you'll be limited to entering text by voice whereas Dragon's word processor will also recognize formatting commands. Using it, you'll be able to save files that you can then open in Microsoft Word with formatting intact.

Weiss says the company's development efforts have been slowed by differences between the way Macs and Windows handle memory. Weiss adds that the Mac version of Dragon's word processor will have one advantage over the Windows release: the ability to open multiple documents. **MW**

May the force not be with UK

Romance and sci-fi glory is the order of the day in the new *Star Wars* spin-off game. But LucasArts refuses to release *Star Wars: Episode 1 Racer* in the UK, so you can't feel the force here – at least, not on a Mac. Available online, the LucasArts site won't take orders for Racer submitted from outside the US. As with *Sim City 3000*, another outstanding game currently unavailable on these shores, the UK is once again the victim of US myopia.

"Climb on, strap in and experience the pure adrenaline-pumping excitement of the Podracing sequence from *The Phantom Menace*," goes the LucasArts hype. Sadly, Brits Alec Guinness, Ewan MacGregor, Liam Neeson, Dave Prowse (Darth Vader), Ian McDiarmid (The Emperor), Terence Stamp (Chancellor Valorum), Frank Oz (Yoda) and Anthony Daniels (C-3PO) will have to travel to the US to join in the fun.

James Beaven, PR manager for distributor Activision confirms that there are "no plans" to release Racer in the UK. Activision's Guy Cunis told *Macworld*: "It's a US-only product at the moment, as LucasArts can't perceive a market in the UK at this time."

Yes, that's right – no market for *Star Wars* games in the UK Mac market. *Macworld's* games' expert – and former editor of IDG's *MacAction* – Vic Lennard was astounded: "Every kid with an iMac will want Racer. All LucasArts will create is a grey market for its games over here."

'Grey' imports of software are products shipped from the US, to be resold in the UK outside of ordinary distribution channels. Grey imports do not show up in market share statistics, which furthers manufacturers' perception of a local market's worth. And so the cycle continues.

PC Pod

Since its first public display at July 1999's Macworld Expo in New York, little has been heard of Racer. Racer is based on one of the more memorable scenes from *The Phantom Menace*, which involved a high-speed podrace through the canyons and plains of the desert world of Tatooine. At virtual speeds exceeding 600 miles per hour, you compete against more than 20 other opponents in races to the finish. The game goes beyond the movie – rather than racing on just one world, you have eight unique worlds to master, with more than 20 tracks to challenge your skill. With each new race you get to refit your Podracer with new and salvaged parts, upgrading your engines, thrusters and anti-gravity repulsors to help improve your Podracer's performance. The game is designed to support multiple players over a local area network – two to eight players are supported. Despite Steve Jobs' close links to Hollywood, and his pledge that Apple "loves games", if you want to play Racer in the UK, you'll have to buy a PC or Nintendo 64 games console.

– Jonathan Evans & Peter Cohen



iMac designer wins gong

Design guru Jonathan Ive has landed a prestigious award for his ground-breaking work at Apple – where he heads the group that gave us the iMac, iBook and new G4 Power Macs. Ive, Apple's vice president of design, was awarded the inaugural Royal Society of Arts Medal for Achievement in Design.

He received the medal from Richard Seymour, president of British Design and Art Direction (D&AD). British-born Ive, 32, was being interviewed by Seymour as part of the annual D&AD President's Lectures in November.

Ive won rapturous applause from the 500-strong lecture audience gathered at London's Institute of Education in Bloomsbury.

The medal – for continued excellence – will be presented every three years to former winners of RSA Student Design Awards (SDA).

As an industrial-design student at Newcastle Polytechnic, Ive bagged two SDAs – one for outstanding interactive-media work, and another for an "off-the-wall" telephone design.

Turn-up for the iBooks

Shaven-headed Ive – looking like he'd just stepped off the Wembley terraces in rolled-up jeans and black T-shirt – also gave the audience a detailed insight into the creative and industrial processes behind his mould-breaking designs for the eMate, the G3 PowerBooks, the G4 Power Mac and, of course, the iMac range.

Ive wowed the audience with never-before-seen photos of his products' interiors. Each iBook, for instance, has a tiny spanner set behind the plastics for emergency screen replacement. "It's details like these that make Apple so special," he explained.

Ive also revealed that the Apple design team originally wanted to have the iBook's entire power adaptor plug (power connector) casing glow with amber light during recharging and green when fully charged. However, as they could achieve only partial success, Ive and his cohorts left the innovative amber/green glows to the power-socket ring only.

Other Ive facts: The clear plastics on the new iMacs, Power Macs and Cinema Display had to be redesigned as a lens. It's the refined shape of the new iMacs that allowed the design team to dispense with the noisy interior fans – hot air circulates quicker around the slightly squatter plastic case, and pours through the handle's many vents. The iBook's built-in antennae determined "the shape of the whole product".

During a brief Q&A (the design wizard claiming jet lag), Ive was asked: "What's next?". "I couldn't possibly talk about that," he answered with a smile.

MW

Buoyant Apple shares break \$110 barrier

Apple's share value has shot through the roof – hitting \$110 per share at the time of going to press – with market analysts claiming it will continue to soar. Shares are now worth nearly ten times what they were before interim CEO Steve Jobs returned to Apple.

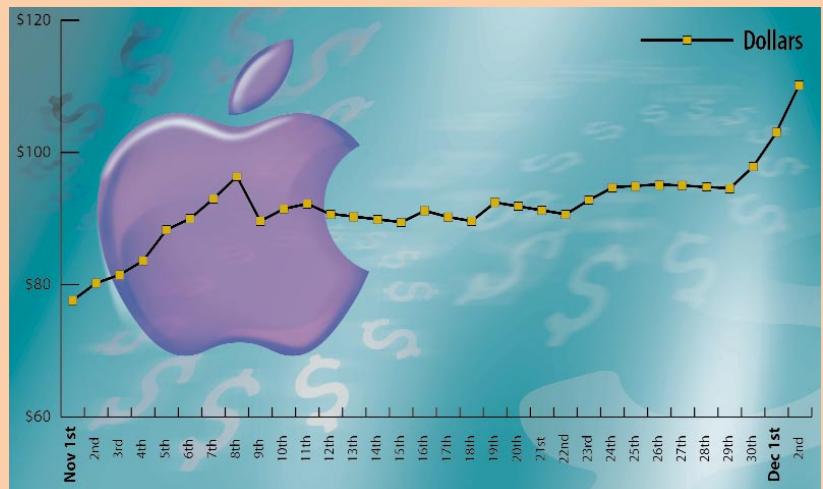
The share-value surge is down to buoyant Apple sales, with 210,000 iBooks expected to ship this quarter, rather than the predicted 170,000.

Market-research firm PC Data reported that the iBook was the top-selling consumer notebook in the US during October.

Top US market analyst Kevin McCarthy, of Donaldson, Lufkin & Jenrette, expects Apple stock to climb to the unprecedented heights of \$140 per share. His bullish prediction is underpinned by the expected Christmas surge in iMac sales in the run-up to Christmas. Wall Street sources expect Apple to experience a sizeable backlog of iBooks orders at the end of the quarter.

Another US market analyst firm, AJP Morgan, is more conservative in its Apple-share estimation, expecting it to reach no more than \$115.

Other reasons cited for Apple's strong showing are the resolution of its G4-line supply problems, and expected announcements of a raft of new developments, at Macworld Expo in San Francisco



in January 2000, adding to the good news.

Among the touted Expo launches are a revised iBook, and Mac OS X. The revamped G4 range – see page 18 – has also excited Wall Street brokers.

A total of 16 financial analysis and investment firms rate Apple as a “hot buy”, with other major firms suggesting that Apple stocks be “held”.

Since the end of October, Apple's share value has risen by more than \$25. When Jobs retook control of Apple, shares had fallen as low as \$12. Rumours on the Web claim that Apple's record market-showing may signal the departure of Jobs. The rumour-mongers claim that Jobs feels his work at Apple is done, allowing him to turn to his animation company, Pixar, whose shares also rose – by \$4 – in the same period. **MW**

– Jonathan Evans

Business briefs

■ Apple sources say the company has hired Allen Moyer as vice president of real estate, construction and facilities. Moyer directed the design and construction of EuroDisney and MGM Studios. One Apple watcher said: “The appointment of Moyer lends credibility to recent reports that Apple is set to revamp the way it sells its products in the retail sector.”

■ Microsoft has ended its duel with AOL over instant-messaging communications, in the light of a possible security threat. With Microsoft's new beta version, Messenger 2.0, Microsoft announced it would provide no more updates to enable interoperability with AIM.

■ Aladdin Systems, developer of StuffIt, DropStuff and other utilities has moved to Wall Street. The new company, Aladdin Holdings will trade publicly on Wall Street under the acronym ALHI.

■ Lycos is acquiring the popular online gaming content-provider and direct marketer, gamesville.com, in a \$207 million deal. The deal should boost revenue and usage for Lycos.

■ Proteron has acquired @Soft's digital audio-encoder MPeacker. MPeacker is the only Mac encoder that supports MPEG Layer II (MP2). Proteron is set to market MPeacker internationally as MPegger.

■ The UK government is to pump £20 million into the UK High Technology Fund to help emerging hi-tech businesses. It will offer equity finance for small- and medium-sized hi-tech firms.

■ Corel denies press speculation that it's facing a takeover by Red Hat, the Linux specialist. Both companies' share values have benefitted from the rumour.

Apple buys Raycer Graphics

High-end 3D chip maker's design team to boost Mac

Apple has purchased Raycer Graphics, a 3D graphics chip maker. Raycer designs 3D graphics acceleration chips for high-performance computers and graphics workstations, although none of its products are available commercially. The company was partially funded by Microsoft's co-founder Paul Allen.

It seems that Apple purchased the company out of interest in Raycer's high-end design team. The purchase has ignited rumours that Apple aims to work on a high-end integrated chip set, or perhaps design a router. The high-end designers from Raycer have expertise and hold patents that

could be useful in this regard. Chief technology officer, Jerome Duluk Jr holds a patent on at least one method for a spanning and sorting rendering system used in 3D graphics.

Raycer supports open industry standards such as Silicon Graphics' OpenGL, which Apple adopted as its 3D graphics API.

Main source

Apple currently sources its 3D hardware technology from ATI Technologies, a major manufacturer of 3D graphics hardware. ATI is the leading original equipment manufacturer (OEM) provider of 3D graphics hardware in the marketplace today; its chipsets

are found in many major brand-name PC's and laptops.

ATI has come in for criticism from Mac people in the last year for delays associated with the release of its retail products, and for reported performance problems with its cards and drivers.

Reports indicate that the purchase could be motivated by a plan to improve the graphics capability of Apple's machines.

Michael Kwatinetz at Credit Suisse First Boston says: “Apple bought the engineers and the technology – they are making sure they have the parts they need for computers.” **MW**

– Wendy J. Mattson & Peter Cohen

Kai gets tooled-up for Web graphics

MetaCreations has announced Kai's Power Tools (KPT) 6, the latest volume in its series of image effects for print and the Web. The new set of Adobe Photoshop plug-ins comprises eight plug-ins from the MetaCreations KPT X series, and two extras, originally developed by RAYflect.

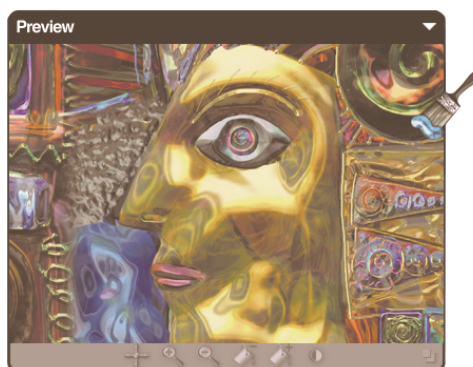
The image filters include KPT Equalizer, which corrects blurred images, KPT Goo liquid distortion brushes, and KPT Materializer for creating dynamic surface-textures.

KPT LensFlare creates realistic glows and halos, and simulates reflections of a bright light on a camera lens. KPT Gel is a set of 3D paint-tools for synthesizing photo-realistic materials, using environment mapping, accurate lighting, reflection, refraction, tinting and transparency.

Artists can create real-time 2D wave distortions with the KPT Turbulence plug-in, build organic textures with KPT Reaction, and use KPT Projector to add perspective warp effects. KPT 6 also introduces SceneBuilder – a Rayflect plug-in for creating realistic 3D scenes – and SkyEffects for creating stormy skies, sunsets, moonlit nights and rainbows.

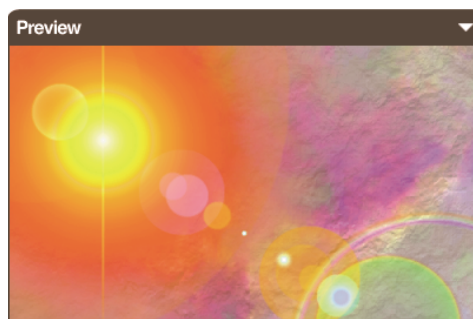
As well as the new effects filters, KPT 6 delivers enhancements such as a standardized interface and large real-time previews. It costs £109 to new users, and £70 to existing ones.

Computers Unlimited, 0181 358 5857



Tools for the job

Power Tools features Gel (above), for producing photo-realistic results and Lens Flare (below) for realistic camera lens halos.



Toshiba consumer camera in frame

Toshiba has unveiled a 2.14 million pixel digital camera, the PDR-M5. Expected to sell for £553, the camera has a 3x optical and 2x digital zoom, and can capture up to 960 seconds of .AVI video. It has a USB interface, and ships with 8MB SmartMedia storage and 16MB of internal memory.

It offers a choice of three pixel resolutions: 1,600-x-1,200, 800-x-600, and 320-x-240. The PDR-M5 has a built-in flash with



auto red-eye reduction, fill-in, and slow synchronous modes. The Burst shot mode takes four images per second, the Multi-shot mode shoots 16 images per frame, and the Bulb-shot feature takes pictures in low-light levels

without the flash. The camera also has a self-timer and an optional adaptor, for using standard 52mm filters and lenses. The PDR-M5 comes with Image Expert software, for quick image downloading.

Toshiba, 01276 62 222

NEC goes flat-out on CRT launch

A new 17-inch flat-screen CRT monitor from NEC has hit the shelves. The £169 MultiSync FE700 CRT offers a screen image that has no geometric distortion in its corners. The viewable image-size is 16 inches. Aimed at business and home users, the monitor reduces glare by 85 per cent, and reflection by 500 per cent, according to NEC. It has a horizontal scan range of 31KHz to 70KHz

and a vertical scan range of 55KHz to 120KHz. The FE700 runs at a top pixel-resolution of 1,280-x-1,024 at 66Hz, while the recommended resolution is 1,024-x-786 at 85Hz. The FE700M offers multimedia capabilities. This has an audio base, with two 1W full-range speakers and a headphone output jack.

NEC, 0645 404 020

USB 2 MIDI released

Steinberg is shipping its new USB 2 MIDI interface, priced at £60. It has two In and two Out MIDI interfaces, and 32 separate MIDI channels. Open Music System (OMS) software – the music system extension for the Mac – is also supplied. MIDI activity is monitored by indicators for all ports, and a Bypass mode sends data through the USB 2 MIDI – even when the Mac is turned off.

Arbiter group, 0181 970 1909



CopyPaste download

The clipboard extension CopyPaste has been updated to version 4.4. The program delivers 100 inter-application clipboards to which data and images can be transferred. New features include extended drag-&-drop, that stores the last ten copied items. CopyPaste can save all 100 clipboards through restarts – and sets of ten clipboards can be loaded and saved. The shareware costs \$20, and registered users get all upgrades for free.

www.scriptsoftware.com

HP blues its top

Hewlett-Packard has launched a range of translucent coloured lids for its DeskJet 800 series of iMac-coloured ink-jet printers. The £6.70 lids replace the standard lid. They can be changed easily, by removing the door and clicking the new one into place.

Hewlett Packard, 0990 474 747

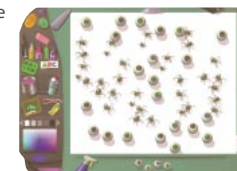


Disney art for all

Disney's Magic Artist Studio CD-ROM aims to teach children of all ages how to draw "the Disney way".

The £30 software available from major retailers, combines art tools with 3D and animation functions, and step-by-step lessons. Up to 3,000 frames of Disney animation are included.

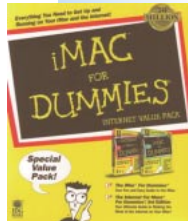
Disney Interactive, 0181 222 1571



CDs and books

Value packs a punch

iMac for Dummies Internet Value Pack is a box-set specially priced at £28.99



It includes two titles: iMac for Dummies and Internet for Macs for Dummies 3rd Edition. This box-set will help you master the iMac's specialities and steer you around both the Internet and email management. See Reader Offers on page 105 for further discounts.

Transworld Publishers, 0181 579 2652

FireWorks enlightener

Fireworks 2 Bible costs £39.99 and is the ultimate guide to this powerful

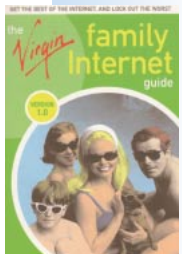


Web-graphics tool. Author Joseph Lowery shows you in step-by-step fashion how to create eye-popping art for the Web.

Transworld Publishers, 0181 579 2652

Trio for Net rookies

Virgin has published three £4.99 pocket-sized Internet books: The Guide to the Internet; the Family



Internet Guide and the Internet Shopping Guide. All are concise, easy-reference texts designed for Net novices.

Virgin Publishing, 0171 386 3300

Multimedia magic

Bob Hughes' *Dust or Magic* reveals the secrets of successful multimedia design. The £29.95 book also covers the history of multimedia.

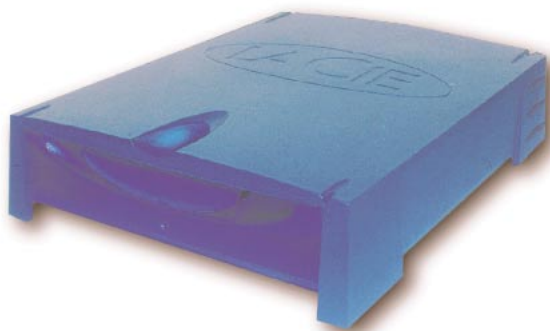
Addison Wesley, 01279 623 932

Photoshop start-up

Photoshop 5.5 Visual QuickStart Guide is a £14.99 step-by-step guide to basic photo editing, manipulation, and correction techniques.

PeachPit Press, 01279 623 623

La Cie's FireWire monster



Drive time

The La Cie 37GB drive is the largest FireWire drive available.

Macs and iMac DV. The drive offers an access time of 9ms – an improvement of 10 per cent over previous La Cie FireWire hard-drives.

For more details on FireWire-based hard drives, see *Macworld*, December 1999.

■ La Cie is also releasing a DVD-RAM archiving solution. The DVD-RAM drive will be able read and write like a conventional CD burner.

DVD-RAM will store data, video, images and sound. La Cie says the iMac DV recognizes DVD-RAM. The DVD-RAM drives are expected to be introduced "early next year".

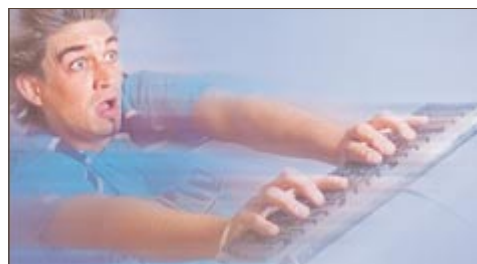
La Cie, 0171 872 8000

Media Cleaner powers-up video

Terran Interactive has launched Media Cleaner Power Suite. This, claims Terran, is the fastest way available to get high-quality digital-video on to the Internet.

Media Cleaner Power Suite includes accelerated versions of Sorenson Video codec (compression/decompression), Media Cleaner Pro, Ultra BlueICE and QDesign's Music codec. It costs £4,399. It permits fast encoding of Sorenson video through its use of Integrated Computing Engines (ICE) acceleration technology.

Computers Unlimited, 0181 358 5857



Clean up

Media Cleaner Power Suite is now quicker and faster.

FireWire drives forward

EZQuest has released the Boa FireWire 4x4x24 and 6x4x24 CD-RW FireWire drives. The Boa FireWire 4x4x24 CD-RW writes to CD-R discs at 4x, rewrites to CD-RW discs at 4x, and reads at 24x with a maximum transfer rate of 3,600 Kbps and a 2MB buffer.

The Boa FireWire 6x4x24 CD-RW boasts a CD-R write-speed of 6x.

It is compatible with

iMacs, blue-&-white G3s, and G4 Power Macs. The new products cost £289 (4x4x24) and £319 (6x4x24). Both drives ship with translucent

graphite exteriors and come with a FireWire cable, Adaptec Toast, Direct CD, EZ CD Creator software, a CD-R disc and a CD-RW disc.

Channel Dynamics, 0870 607 0540



Remote projector sets sites on Web

InFocus has launched a high-specification projector, the InFocus LP755. This is the first projector to ship with InFocus' new LightPort software, which enables Web-based projector management.

LightPort is a software program that lets IT managers access and manage InFocus meeting-room projectors through a network. Remote users can view or deliver a presentation on an InFocus projector using a Web browser. The projector is step-one in InFocus' strategy of integrating projectors into the network-computing environment, via the Web. This feature lets network administrators monitor lamp-life, troubleshoot and even power-up and down.

Based on TFT LCD technology, the LP755 projects full-screen, true-XGA resolution of 1,024-x-768 pixels with an ultra-bright 1,000 lumens output.

The manufacturer promises optimum video quality from the machine. The LP755 has a new graphics chip-set and advanced electronics, delivering DVD-quality video.



Keep InFocus

The LP755 allows network management over the Web.

The LP755 incorporates other useful features: Auto Sensing automatically recognizes and matches the resolution of the data source; instant power off; and a digital magnifier, that lets the user zero in on image details.

The LP755 is £4,495. The LightPort host license is £399.

InFocus, 0181 213 2100

Double-quick

OKI Systems has unveiled the Okipage 8c Plus network-friendly printer. Okipage delivers quality-colour printing at eight pages per minute. OKI claims it is "twice as fast" as its competitors' systems, due to its 200MHz RISC-based processor.

The printer has a 600-x-600 resolution, with 16.7 million colours and 256 shades of grey. The printer ships with 32MB of memory as standard, and this is upgradeable to 144MB.

A 500-sheet paper tray and a 100-sheet auto-feeder are standard, and it can handle paper sizes from A4 to A6.

The printer also has a built-in home page – accessed via the Web – that allows changes to be made to printer settings. This enables the machine to be monitored remotely.

The Okipage 8c Plus costs £2,219. **OKI, 0800 917 6015**



pricing update

ADI cuts monitor prices

ADI has dropped the prices of the MicroScan G56, GT56 and G66 monitors. Their screens are flicker-free and operate at high resolutions. The price decreases are as follows: the 17-inch MicroScan G56 is £199, down from £219; the 17-inch MicroScan GT56 is £219; and the 19-inch MicroScan G66 is £315.

ADI, 0181 327 1908

PhotoDisc offer

La Cie and PhotoDisc have teamed up to offer a discount deal to customers. The offer means that every order of 30 PhotoDisc CDs comes with a free 18GB LaCie NetCD box. With every 50 or more discs the firms offering the 36GB version. The NetCD box lets the CDs you store be accessed over a network. There is also a password-protection facility for sensitive data, and data can be accessed in 9ms, rather than the 150ms standard on CD-ROM drives.

La Cie, 0171 872 8000

PhotoDisc, 0845 302 1212

4th Dimension

ACI, publisher of the 4th Dimension database-development tool, is looking to tempt users of competitive database technologies to the 4D line. Up to December 31, registered users of other database products can purchase the flagship 4D Standard Edition 6.5 for £69 – almost one third of the usual price.

ACI, 01625 536 178

Join the Mac clan

Miramar's Windows NT-to-Mac connectivity solution, PC MacIn for Windows NT, now includes a complete cross-platform networking suite. It costs £189.

Computers Unlimited, 0181 358 5857



PressReady to go

Adobe UK is shipping PressReady, a printing and proofing tool for desktop-colour printers (see Reviews, page 49). PressReady is Adobe's first shrink-wrapped printing solution for creating colour prints from select desktop ink-jets, using PostScript 3, PDF technology, and industry standards. The software is a host-based PostScript 3 RIP, optimized for graphic arts ink-jets. It includes advanced colour-management, based on ICC colour profiles, as well as tools for creating and printing colour-managed PDF files. PressReady is priced at £90.

Adobe, 0171 458 6842

Sony displays duo

The Multiscan E100 and E200 from Sony are 15-inch and 17-inch flat display Trinitron monitors. Sony's FD Trinitron technology gives a visually flat screen, with no distortion and very little reflection or glare. The

Multiscan E100

costs £149. The 17-inch

Multiscan E200 is £249. Both models come with a three-year warranty.

Sony, 0990 424 424

How to sort IT out

UK-based Microspot has released Microspot Media Assistant, a media-management utility that works with any browser to collect, store, organize, and display data. The software lets users create limitless catalogues by drag-&-dropping data from a Web browser, Finder, CD-ROM, and applications. It costs £39.

Microspot, 01622 687 771

Abba good chat

EuroTalk has launched the intermediate version of its Swedish language tuition software. World Talk Swedish is based on the latest teaching techniques, and includes a recording studio for real-life practice, dictation exercises,

and an interactive TV quiz.

Topics include sentence construction, and use of numbers. World Talk Swedish costs £29.99.

EuroTalk, 0171 371 7711



Ricoh duo bridge rookie-pro chasm

Ricoh has launched two new 2.3-megapixel digital cameras, the RDC-5300 and the RDC-5000 – both with a USB connection.

The £468 RDC 5300 is aimed at consumer and business users. It boasts a 3x optical zoom, auto focus/exposure/flash/, as well as auto white balance. It ships with 8MB of memory, and SmartMedia cards can be used to increase the memory to 64MB.

The camera has a built-in auto flash with slow synchro and red-eye reduction, as well as a continuous shooting feature. It ships with a bundle of Arcsoft software including PhotoBase for organizing images; PhotoStudio 3.0 for enhancing images; and PhotoIsland.com for creating virtual photo albums.

The higher-end RDC 5000 costs £553. Its 2.3x optical zoom-lens consists of nine glass elements. This, according to Ricoh, avoids the imaging errors of less sophisticated "step zoom" systems. The camera also has a 2.3x digital zoom-lens.



Reading the 5000

The RDC-5000's 2.3x optical zoom lens has nine glass elements.

Like the 5300, it ships with 8MB of internal memory, and an optional 32MB SmartMedia card.

There are three compression modes – normal, fine and economy – for each of the camera's two resolution modes. The RDC 5000 comes with ArcSoft's PhotoStudio 3.0 and ArcSoft PhotoBase.

Johnson's Photopia, 01782 753 355

XPress 4.1 gets Net, PDF-savvy

Quark has released QuarkXPress 4.1, the latest version of its market-leading desktop publishing software. Version 4.1 includes improved support for PDF, scripting, and Internet publishing. Quark has also enhanced several features to make page layout "faster and easier".

The software upgrade includes an improved HTML filter to convert text from QuarkXPress text boxes into HTML, and adds the ability to import HTML into QuarkXPress documents.

Building on existing tools to facilitate digital workflow, version 4.1 offers better proofing and placement of PDF files in XPress documents. An enhanced PDF Filter converts documents into PDF files using Adobe Acrobat Distiller version 3, or import pages from PDF files into picture boxes.

The QuarkXPress 4.1 updater is available – as a world exclusive – on this month's **Macworld** CD. In addition to the update, the CD includes 100 of the best XTensions.

XPress 4.1 documents will be able to be opened by XPress 4.0.x versions.

Quark is offering an £82 discount on upgrades from XPress 3.3x to 4.1 during December and January. Customers can order online (www.quark.co.uk) or by calling 01483 445 566.



Bundle joy

The ScanMaker V6

includes ScanWizard,

Caere OmniPage LE, and

Adobe Photoshop LE.

Dual in crown

Adual interface scanner, supporting SCSI and USB, has been launched by Microtek. Designed to appeal to both home users and professionals, the ScanMaker V6 USL is a flatbed scanner, priced at £149. The scanner features a 14-inch scanning area, enabling it to scan Legal-size paper.

The ScanMaker V6 USL offers true 36-bit colour depth and an optical resolution of 600-x-1,200 dpi. Three scan modes are available – colour, greyscale and black-&-white. The software bundle comprises Microtek ScanWizard scanning-control software, Caere OmniPage LE for OCR text-scanning, and Adobe Photoshop LE image-editing software. It also offers PlusColour enhanced optimization that accurately reproduces original colour.

Microtek, 01908 317 797



David Fanning

Want to know what the future holds for the Mac? Don't tell me I didn't tell you.

Mystic megahertz

The all-too-mortal words of Charles Duell – commissioner of the US patent office – were: “Everything that can be invented has been invented”. He said this in 1899. Well, we can’t all get it right all of the time – and predicting the future is a haphazard business at the best of times.

Other famous ill-advised predictions include:

- “I think there’s a world market for maybe five computers.” Thomas Watson, chairman of IBM, 1943;
- “In the future, computers may weigh as little as 1.5 tons.” *Popular Mechanics*, 1949; and
- “640K ought to be enough for anybody.” Bill Gates, 1981.

Science fiction writers have probably got a better batting average, because they spend all day dreaming up future histories. Notable successes include Jules Verne and his moon adventures, Arthur C Clarke and his communications satellites, and Isaac Asimov and his robots – although this last one has some distance to go. For every hit, there’s a legion of misses; the future, quite simply, cannot be predicted... or can’t it?

I understand the risks, and fully expect your ridicule in years to come, but I might just be right.

From studying the above predictions it seems that even keeping within the current laws of physics is no guarantee of success. The ton-and-a-half of computer is a case in point. I mean, who could have guessed that valves would disappear and transistors would become microscopic so quickly. Not *Popular Mechanics* for starters.

So, here are my predictions for the next 10 years.

First, everybody who has a telephone will have a computer. In fact, it’s likely that many telephones will be replaced by computers – used in conjunction with the Internet. What about operating systems? Will Microsoft continue to dominate the OS world? The answer, is “No”. The recent antitrust trial and tribulations of Microsoft spell the end of its total domination.

There is, though, a good chance that something bigger – and worse – may replace it. But for the moment, Linux, Mac OS X and other Unix-based operating systems will give Microsoft the thrashing it deserves. However, Microsoft will remain the Coke (with a large C) of the computing world, and, with luck, Apple will be the Pepsi.

And what about speed? Well how about this for

prediction three? We will use processors that make MHz speeds irrelevant. We are already reaching the physical limits for the miniaturization of transistors, but Quantum processors – or those that use light – will be the norm by 2010. I expect Apple to ship the speed equivalent of a 15 gigahertz G4 model halfway into 2010.

And computers will look different in a decade. Glass CRTs (cathode ray tube) – if any still exist – will be faddish retro-items for dandy conservationists. Everybody else will be using a variation of LCD, Plasma or, most likely, LEP (light emitting plastic). Flat screens for all, then, by 2010.

Keyboards will remain the same because our hands will, but are doomed to be replaced by voice-activated technology. This will come on in leaps and bounds globally over the next ten years. Because voice-activation technology makes sense for ideographic writing systems, such as those in Japan and China, it will take root quickly in the Far East. It will catch on here only if we can overcome our timidity about speaking to a machine in the office.

Storage capacity will also grow, and you should be looking at 200GB hard drives for entry-level machines and multiple terabytes for Pro models. Removable storage, however, will disappear.

Because all computers will be interconnected with high bandwidths, this will preclude the need to place something on an external disk. Backup and archiving will be done from one site to another, rather than onto tapes and disks.

And what about the Internet? Well, it isn’t about to disappear. Its guts will always be clogged with email jokes, spam and porn – with the occasional colonic irrigation of work-related uses – but these arteries will become ever larger. Soon, we’ll have two megabit (Mbit) connections but in ten years’ time this will be up to 20Mbit – and people will still be moaning that it isn’t enough.

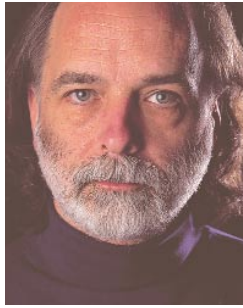
The truth is that change is gradual, and we fail to notice the steady creep of technology as it changes our lives.

I mean, in 1989 I was at the cutting edge with my Mac IIci with the maximum 8MB of RAM and a 200MB hard disk. I now have 256MB of RAM and 20GB of storage, but I hardly noticed the change.

In finest *Blue Peter* tradition, bury this column in a time capsule and re-read it in a decade.

Well, how did I do?

MW



Michael Prochak

The Y2K doomsday scenario could all be a bad dream – or a living nightmare.

The future is black

The date is 1 January 2000, and last night is hard to remember. They say there was madness in every direction and, in the dim squalor of the dawn's early light, memories of the previous millennium are already extremely hazy. After the binge, the Y2K dominoes have already started to fall. However, here in the countryside, we do have weapons. And we like to shoot them at night. Last night, when the TV still worked the town hall clock said "1900" instead of "2000". Everybody went ballistic. Homer Simpson was responsible for fixing Y2K problems at the nuclear plant and, like Action 2000, had assured everyone that there was "no problem".

The failure of the plant then cross-connected with all of the other plants and computers, and caused total chaos. Everybody started rioting and looting. Embedded chips in household appliances went awry, with the waffle iron attacking the family. And oh yes – planes DID fall from the sky. Who says life doesn't mimic art?

It is now assumed that the second and third weeks of January will expose any gaps in everyone's preparations, and, by the fourth week, there will be no fans working for the proverbial to hit. In commerce, some companies may not be able to invoice, or will be faced with other difficulties, leading to an immediate cashflow problem. This may push around 40 per cent of them over the edge.

Out on the Internet, huge virtual craters have appeared where non-compliant Unix systems have disappeared up their own servers. That is, assuming you can still manage to log onto your provider. As often seems to happen in matters that border on the prophetic, few predicted accurately what would happen in the Y2K situation.

Now we know that no one could have. It was a little like a massive earthquake that took place everywhere at once. The aftershock, especially to those who had wanted to ignore or deny the problem, was enormous. Initially, all the lights worked just about everywhere as the new century dawned. But fallout from the so-called Y2K glitch looks like it will eat away at economies for months. In daily life, problems are becoming complex, but more chronic than acute; a lot of relatively minor problems are already beginning to gum-up the works. Of course, my Mac worked fine – until the power outages started. The

old PowerBook 280 is working okay toom, at the moment. But when the battery runs down... Apparently, this is just a spike in the pain graph for Y2K, with the real discomfort kicking in in nine to eighteen months' time. This "spike" has been caused by embedded systems.

However, we have an accumulation of economic effects to look forward to that will go on and on. The worst part will probably arrive at the true end of the millennium... the end of 2000. The hazy underpinnings of "Life As We Know It" simply turned out to be highly dysfunctional systems already plunging headlong toward burn-out. Y2K was a symptom, not a cause, reflecting the end of an Industrial Age – characterized by an unshakable faith in technology and commerce, or laterally, digital technology and e-commerce. No system functions by itself: all systems are inherently interconnected.

Three days ago, when there was still TV news and daily newspapers, it was reported that Bill Gates had cashed-in his entire fortune and bought the world's remaining coalfields, along with a number of loggable forests. He then apparently disappeared with a small – but heavily armed – militia. On a positive note, chip-challenged G4s are in shops that haven't been looted. Counting the tins of sliced peaches in my cupboard reminds me that part of the problem with Y2K was that, while we were so busy trying to make sense out of the incomplete and conflicting information available to us from all over the world, we missed seeing some of the "wild card" factors that would escalate things to unimagined levels. We could've benefited from looking at things from the perspective of a chaos theorist – but few were listening. Most people didn't know how to apply what they were saying anyway.

However, one important lesson to come out of this mess is that we need to learn to let go of our attachment to certainty and familiarity. Instead, we have to develop a capacity for dealing with what may appear to be intrinsically unknowable. Outside, I hear the ugly screams of yahoos, that have flooded out of the cities, trampling across fields, brandishing pitchforks and rakes.

In the distance, an ancient air-raid siren pounds in my ear, but subsides into the slow, steady beat of a small, but inaccurate, digital alarm clock. And as the hangover kicks in, I wake up. Or do I?

MIW

Ive should be allowed to
shape more than the iMac

Desktop critic

DAVID POGUE is the author of *iMac for Dummies* (IDG Books Worldwide, 1998) and the *Great Macintosh Easter Egg Hunt* (Berkely Books 1998). He also wrote *Macs for Dummies*, fifth edition, updated for Mac OS 8, *The Weird Wide Web* (IDG Books Worldwide, 1997) and *The Microcloth Joke Book* (Berkeley, 1997).

A design on life

Think Different. What a great slogan. First of all, it's perfectly grammatical; Apple's telling you not how to think, but rather what to think about. Nobody complains about "Think big", "Think thin", or, as I saw on a skier's car recently, "Think snow". The oft-proposed revision, "Think differently", makes little more sense than "Think bigly" or "Think slowly".

Furthermore, Apple actually lives by its motto. Frankly, I have my doubts that things actually go better with Coke, or that quality really is job-one at Ford. But Apple's designers truly do spend their days reconsidering computer design.

The iMac's cables, for example, connect on the side, where you can reach them, instead of on the back. The iBook wakes up when you open it – a brilliantly obvious behaviour. And the ingenious drawbridge-like side-panel of the Power Macs should make other computer makers smack each others' foreheads.

Apple's inspired me. I've become obsessed with design – even the design of everyday things. Why are things the way they are – and why can't they be better? I can't help wondering what everyday products would be like if Steve Jobs and his chief designer, Jonathan Ive, could have a whack at them. If they ever quit their day jobs, here are some ideas to get them going.

The clock radio Why must we adjust the wake time by pressing a fast-forward button, praying that we release it at precisely the right instant? Every hotel guest in the world wastes three minutes nightly performing this ridiculous ritual. Would it be so difficult to add a number pad, like the number keys on a telephone, to the standard clock radio so that I could simply punch in 830 A and be done with it? Touch-tone phones cost virtually nothing; number-pad parts are cheap.

The nappy New parents quickly master a peculiar skill: gauging whether a baby's nappy needs to be changed. You wind up pinching the white, gel-filled panels of the diaper in a queasy attempt to measure its change-worthiness.

So here's my brilliant idea: Why don't the manufacturers make nappies that turn blue when they're wet? I've seen toothbrushes and razor cartridges that change colour when it's time to replace them – why not diapers? The parents would win, because their babies wouldn't crawl around in wet diapers longer than necessary – and Lord knows, the

nappy companies would win, because parents would be sure to change nappies more often – at least one hopes so.

The keychain At high-tech companies these days, employees carry photo-ID cards that unlock doors automatically as they brush by. You can wear one on your belt, to keep your hands free. Phase One: Make this no-hassle system standard in homes, too, so you don't even have to put down the groceries.

Phase Two: Program these cards to store the passcodes for every door in our lives – front door, back door, car door. Physical keychains, and their accompanying inconvenience, can then disappear forever. (Ironically, Mac OS 9's Keychain control panel is exactly this idea. Now it just needs to leave the software world and enter the real one).

Airline Web sites At least four times in the last several years, I've driven all the way out to the airport, only to find that my flight has been cancelled. Suppose that, when we bought a ticket, airlines let us indicate an email address or a pager, fax, or phone number. Then, in the event of a delayed or cancelled flight, we'd be notified automatically.

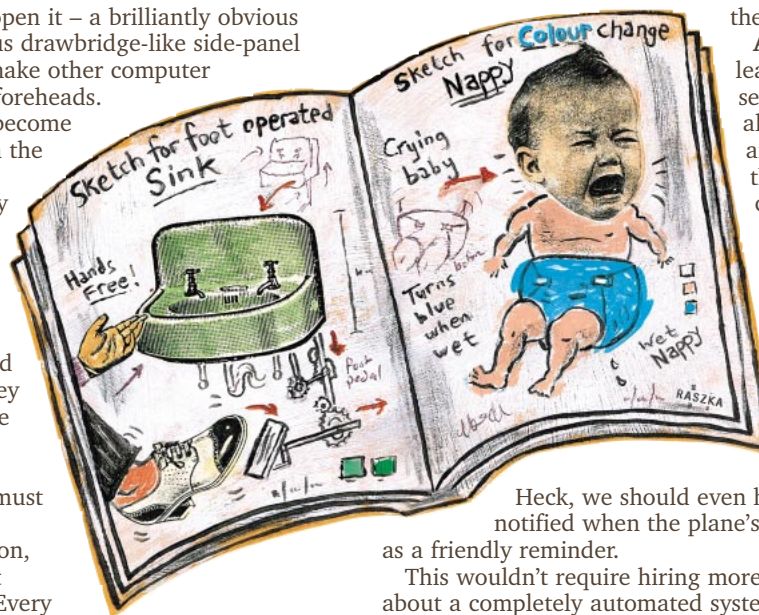
Heck, we should even have the option of being notified when the plane's leaving on schedule – as a friendly reminder.

This wouldn't require hiring more staff – I'm talking about a completely automated system. It would take a programmer about a weekend to set up. The airline could make fabulous marketing hay: "We're the first airline that cares about your time." (Believe it or not, I once laid this idea on a board member of a major airline. Needless to say, it expired in his head faster than last year's frequent-flyer miles).

The kitchen sink In hospitals, you step on a foot pedal to turn on the water. Why not at home? You could wash hands or dishes far more conveniently, prevent the spread of faucet-handle cold bugs, and save water, because you'd avoid leaving the tap running.

The mouse Before they overhaul the world's keychains and nappies, I've got a more pressing assignment for Jobs and Ive: Apple's modern mouse. You can't rest your hand on the stubby little thing, and it's hard to tell when you've got it straight. This is one case where Apple needs to think differently about Think Different.

MW



MACWORLD RATING

★★★★★/9.0-10.0 = EXCELLENT

★★★/7.0-8.9 = VERY GOOD

★★★/5.0-6.9 = GOOD

★★/3.0-4.9 = AVERAGE

★/0-2.9 = POOR

MACWORLD POLICY

At Macworld, we don't think our readers should have to worry about whether ratings are based on a real product or a prototype. Therefore, we simply don't rate products unless they are real, shipping versions – the products we rate and review are the same products you end up buying. All prices exclude VAT, unless stated.

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Apple's super-computer range



Power Macintosh G4/450MHz

Manufacturer: Apple Computer (0800 783 4846)
www.apple.com/uk

Pros: Fast; tons of memory and storage; wireless networking soon.

Cons: Supply is limited and Cinema Displays are impossible to find; Velocity Engine is not running at full speed yet.

Price: 350MHz, £1,099; 400MHz, £1,699; 450MHz, £2,399;

Star Rating: 350MHz ★★★★★/8.8
400MHz ★★★★★/8.5
450MHz ★★★★★/8.4

All the excitement of the Power Mac G4's introduction evaporated when Apple failed to deliver its promised goods (see News, December 1999). The lack of 500MHz processors meant that almost before it had shipped any G4s, Apple downgraded the specifications. Not the best PR exercise in Apple's history – though sadly, not the worst.

Orders for the 500MHz machines, and then all pre-orders, were cancelled, then un-cancelled and finally delivered with lower specs for the same price – excitement turned to anger and frustration.

However, with a neat revamp of the line-up, Apple has made us smile again.

The first thing you notice about the Power Mac G4 is the new colour – Graphite, a marketing way of saying grey, but still better than beige. The handles are now clear, allowing you to see the tiny built-in AirPort antennae.

As we went to press, Apple revamped the whole line-up to include the new Rage 128 Pro graphics card, featuring “up to a 40 per cent increase in 3D graphics performance”, according to Apple. The 350MHz model's architecture has also been bought up to date with that of the 400MHz and 450MHz Power Mac G4s. Now all the G4s use Apple's new *Sawtooth* logic board design. This includes a slot for an AirPort card, three times the memory bandwidth at 800Mbps, twice the PCI bus throughput, and a third internal FireWire slot.



The units tested here did not include the new graphics card, and the 350MHz model we tested was based on an older non-Sawtooth logic board. As a result, you can expect even faster speeds than those recorded in the speed chart (right). Check with your supplier that you are purchasing the very latest versions – especially if you're after the 350MHz model as you'll want the faster Sawtooth version, with DVD.

All the rage

ATI RAGE 128 graphics cards power the video capabilities of all the models. With 16MB of RAM it will power the biggest displays, in millions of colours, at resolutions up to 1,600-x-1,200 pixels. The card resides in an AGP (Accelerated Graphics Port) 2x dedicated slot. AGP provides a high-speed connection to move large blocks of 3D texture data from the system memory to the graphics controller.

The new logic boards retain USB and FireWire, but all older connectivity options have now gone. If you don't like the diminutive iMac-style keyboard, you'll have to splash out an extra £50 pounds on a full-size USB keyboard. More FireWire

hardware is now coming on line, so fast and cheap storage expansion is available.

Can't start a FireWire

There are optical drives powered by FireWire, but as yet no Jaz or Zip FireWire drives. Fortunately, the 400MHz and 450MHz models have a Zip drive built-in. This makes it more flexible for removable storage, though a Jaz option would be helpful. The DVD-RAM format should see a boost now it's included in the 450MHz Power Mac. The drive will read CDs, DVD-ROM, DVD-Video, DVD-RAM and just about any other CD format.

With the high-end models, you should have the option to buy the Cinema Display. Again, Apple is a victim of its own success and all the Cinema Displays are sold out. The Cinema Display is a fantastic 22-inch LCD flat-panel monitor, and can be ordered only with a G4. Such a rare item of beauty has a price tag that is something of a heart stopper though. The combination of the 450MHz G4 and Cinema Display would, if you could get one, cost £5,198. The UK Web site allows you to register to be notified by email when more arrive.

Storage and memory are well catered for. The 350MHz model comes with 64MB of RAM, and a 10GB hard drive. The 400MHz Power Mac G4 doubles up with 128MB of RAM, and a 20GB hard drive. The 450MHz model starts with 256MB of RAM, and a hulking 27GB of hard-disk space. If you are not satisfied with that kind of power, you can opt for as much as 108GB of storage – powered by a fast dual-channel SCSI card. Be prepared to spend an extra £3,300 on such luxury, though. There are four RAM slots available, and there is a theoretical upper limit of 1.5GB of RAM. But you'll have to wait for 512MB RAM modules to be invented first. Apple optimistically expects this to happen before the end of 1999, but, in the meantime you can spend an extra £1,030 on a giant gigabyte of RAM.

The new G4 Power Macs should ship with Mac OS 9. If your's comes with OS 8.6, check with your supplier that it's from the revamped line-up. All units shipped before early December, unfortunately, will be from the original range.

AirPort cards aren't yet shipping in the UK – we may have to wait until January for wireless networking on the Mac. Apple has also just released a software version of the AirPort Base Station (above), which lets you use any Mac with an AirPort Card as a hub.

Lethal weapon G4

Of course, the main point of the new G4 models is the actual G4 processor. The much hyped supercomputer power has already caused problems for Apple in the shape of export laws. Any computer capable of a billion floating-point operations per



second – is classed as a super computer and therefore a weapon, in the same way that advanced encryption software is.

So how dangerous is the new G4 processor? It includes the Velocity Engine (VE), previously known as AltiVec, which is a 128bit vector processor. This means that it can process bigger chunks of information at once, the processor having a higher bandwidth than previously. It also adds 162 new instructions to speed video, voice, and graphics applications. Applications need to be re-written to take advantage of the extra power. At the moment there is limited options for VE-assisted processing.

One application that should see an immediate advantage is Adobe Photoshop 5.5. There is a plug-in available to enable this capability, but in our tests it really didn't perform anywhere near expectations. Only some of Photoshop's functions take advantage of the VE. So the results of one test using a wide range of filters and actions was actually slowed by having the VE turned on. Individual tests of each plug-in separately measured some rather better results. The rotate-flip command gained the

greatest increase, more than four times faster than on a 400MHz G3. Other filters such as despeckle, resample, lighting and gaussian blur all managed to at least double in speed over the G3 chip. The extra speed is, of course, also due to the faster chip, so in some tests we compared the same machine with the VE on and off. Lighting effects were still more than double the speed with VE turned on, but other filters had less dramatic speed increases.

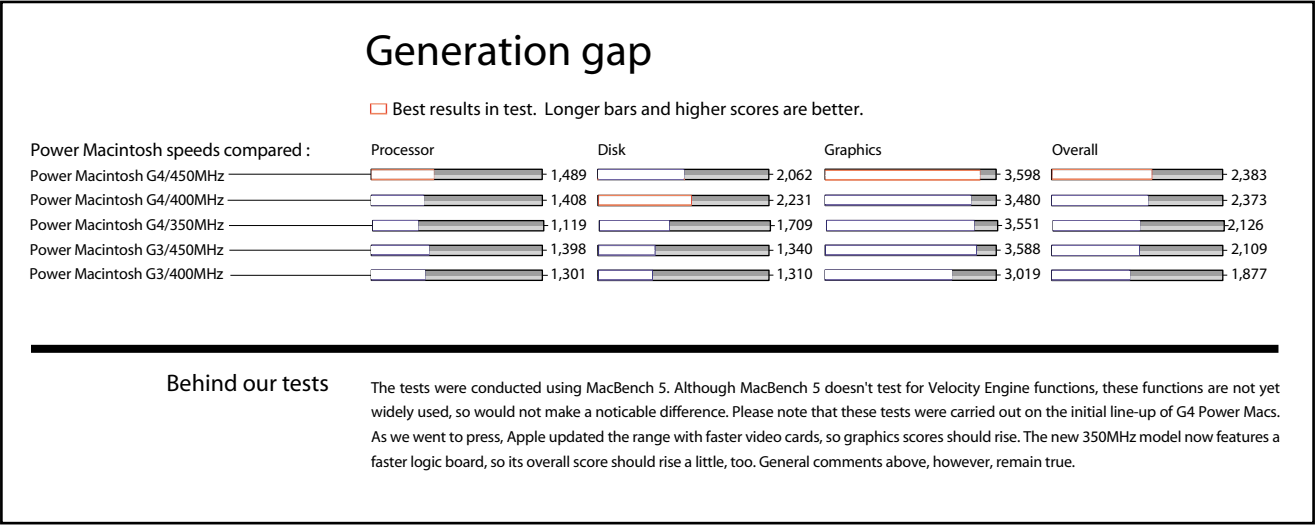
Although some actions were dramatically faster, many filters are not yet optimized. Unless you are currently spending a long time waiting for your images to rotate or flip, you may not even notice the speed increases. Before you cancel your G4 orders, bear in mind that it's still early days for the Velocity Engine.

Macworld's buying advice

If you are looking for the ultimate Mac, the G4 450MHz is it, at least for the moment. But the new 350MHz model is a real bargain at £1,099 (make sure it's the DVD-based Sawtooth version) – and only 11 per cent slower than the top-end system. In our tests, the 400MHz model was a fraction slower than the 450MHz G4, but costs £500 less even if you add 128MB of RAM. Don't discard the G3s just yet – the 350MHz G4 is about the same speed as the 450MHz G3. But, if you're still using a beige Mac, the new G4s are compelling.

If you've got a mix of beige and blue-&-white, trade ups and hand-me downs may be the order of the day.

David Fanning



A bloody good RIP



PressReady 1.0

Publisher: Adobe (0131 458 6842)
www.adobe.com

Pros: Turns your desktop ink-jet into a high-end PostScript Level III proofer at a very low price.

Cons: Current list of supported printers is small; no Pantone-CMYK conversion; ICC profile choice is system-level, rather than document-specific.

Price: £90

Star Rating: ★★★★★/9.3

Though graphic designers have reason to thank Apple for inventing the Mac and Quark for inventing XPress, they should get down on their knees in worship to Adobe for inventing PostScript. Since the mid-1980s, when the Mac first hit the world of graphic design, Adobe's industry-standard page-description language has underpinned the growth of graphic design across the world. But licensing PostScript has always been a relatively expensive business. So if Adobe came along with a PostScript RIP that cost less than £100 and worked with your desktop ink-jet, you'd be interested, wouldn't you?

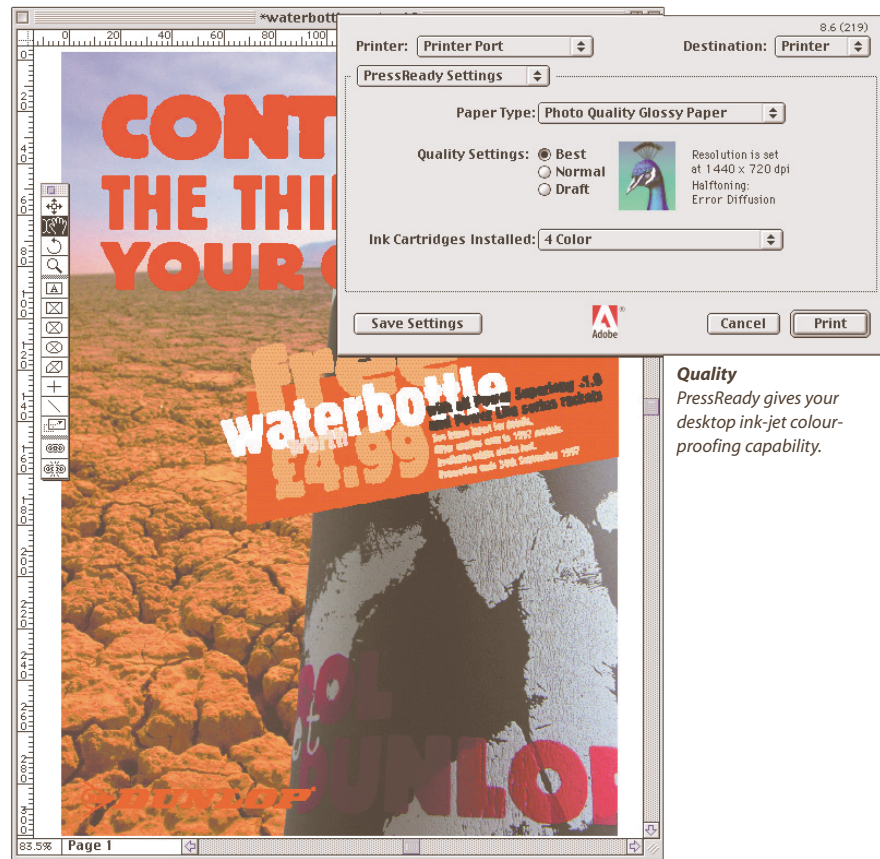
And there's another thing, too. In the days before the Mac, when graphic designers worked with Pantone markers and rub-down Letraset type, clients didn't have to wonder what the colour was going to look like – they could just look at the visuals and see it.

That was then

But, now that the vast majority of graphic design is done on RGB screens, there's no way to get a colour-accurate representation of what a press will produce without either, (a) installing some middling-to-fairly expensive proofing solution, and faffing around with ICC (International Color Consortium profiles) and calibration; or, (b) sending out for expensive 'contract' proofs. So, if Adobe told you that this same PostScript RIP – which costs less than £100 and works with your desktop ink-jet – could also produce a very reasonable simulation of the printed result, you'd be even more interested, wouldn't you?

Too right you would. PressReady, Adobe's first shrinkwrapped PostScript RIP, started shipping in the UK last month – as you read this, graphic designers all over the country will be queueing up to pay their money, and turn their sub-£200 desktop ink-jets into high-end proofers. There are other PostScript RIPs on the market – notably Epson's StylusRIPs, and those from Birmy and EFI – but nothing else is quite so, well, cheap.

PressReady is a Chooser-level, 'host-



Quality
PressReady gives your desktop ink-jet colour-proofing capability.

based' (meaning it doesn't need its own computer to run it) PostScript Level 3 RIP. You specify the printer to which it's linked as part of the installation process, and PressReady appears as two drivers – one if you're using the serial port, one if you're using ethernet – in the Chooser.

Calibrate your monitor if you haven't already, using the included Adobe Gamma control panel. Then use the Adobe Print Color control panel to specify the ICC profile that matches your final output method. The out-of-the-box list includes Euroscale coated and uncoated, Japan Standard and a whole set for US off-set presses, but you can add your own profiles as well. Also, a source colour-space for the RGB components in your document is included.

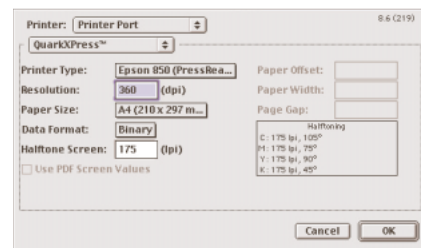
True plug-&-play

Back in the application – under the application-specific sheet in the Page Set-Up dialogue box – specify the printer's PressReady variant as a printer type. Then, in the Print dialogue box, choose PressReady Settings to specify paper type, quality setting and ink cartridges installed – in case your printer supports multiple-ink sets. And, that's all there is to it: this really is a plug-&-play solution. After 90 seconds' clicking in dialogue boxes followed by ten minutes' RIP-and-print time, my Epson Stylus Color 850 turned out a print that was virtually indistinguishable from an Iris digital proof I paid £50 for. It's probably a matter of judgement whether or not you could use a PressReady proof as a sign-off

proof for the client, although it remains to be seen how ready your printer will be to accept it as press-matchable.

RIP-roaring success

Installing PressReady also gives you the Create Adobe PDF 'virtual printer' – a PDF-generation tool that works with Acrobat Distiller 4.0 – and Adobe Circulate, a hot-key launcher for your email application, so you can send your newly created PDFs to a client. Create Adobe PDF – accessible as a printer type through the Page Set-Up and Print dialogue boxes – allows the resulting PDF to be optimized for desktop ink-jets, presses and on-screen display – according to the ICC profile choices made in the Adobe Print Color control panel. Once a file has been set up for printing, the same parameters can be used to RIP a PDF file, which can then be sent to a pre-press bureau for output – providing a theoretically fail-safe way of duplicating the in-house proof version in the output files.



Sign-off

If you want, use PressReady for sign-off proofs. However, it only supports a limited number of printers

One of the beauties of PressReady is that when it comes to colour management, Adobe has done all the hard work for you: PressReady ships with a list of drivers for supported ink-jets that have ICC profiles ready-embedded. One minor complaint concerns the separation of the ICC profile-choice into a system-level control panel – designers will find it too easy to forget that settings made in the Print Color control panel apply to all documents.

Macworld's buying advice

If you're already an advanced PostScript RIP user already, you might

find PressReady slightly inflexible – there's no support for Pantone, Hexachrome or separating spot-colours for CMYK. Plus, there's no queueing facility over and above that provided by the Mac OS Desktop Printer utility. Also, non-PostScript trapping won't work, which means QuarkXPress users are stuck.

Right now, the list of supported ink-jets is tiny – the Canon BJC-8500, the Epson Stylus Colours 800, 850, 1520 and 3000, and the Hewlett-Packard DeskJet 895C, 1120C and 2000C – although Adobe is expanding that list as you read this. Registered users get a free 18-month subscription to the PressReady Internet

Update Web site, to download new drivers as they become available. What self respecting designer could resist the chance to turn a cheapo ink-jet into a high-end proofer for a hundred quid? Buy it.

Karen Charlesworth



Win

... One of five copies of Adobe PressReady with Macworld Jackpot. Ring 0900 1010 240 before January 31. Calls cost 60 pence per minute.

Database-publishing tool



RagTime

Manufacturer: B&E Software

www.besoftware.com

Distributor: LanMarque (01932 222 821)

Pros: Good array of tools; superb manuals.

Cons: Steep learning curve; a bit too expensive.

Price: £475, single user; £1,725, five-user.

Star Rating: ★★★★★/8.7

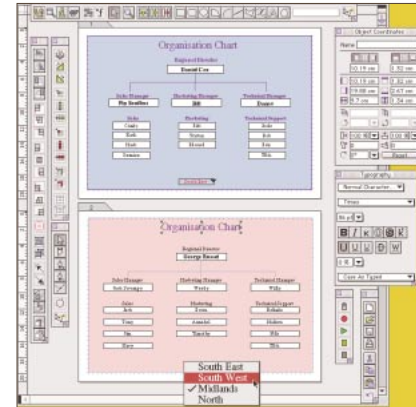
When it comes to laying out a book or publication, the software set-up is generally simple. But, a business with weekly or annual reports, catalogues and price lists, has different requirements: integrated graphs, spreadsheet-based tables, and the manipulation of data can be awkward to handle with a DTP package.

Office 98 offers a solution – but the programs are hardly integrated, requiring the creation of a number of documents, followed by importing-&-exporting between them. What's needed is a program, that handles all the different elements in the same way, RagTime is the answer.

A RagTime page consists of a number of boxes, the shapes of which can be selected from a long list, including rectangle and oval, through to polygon and bézier.

Rather than differentiate between a box containing a graph or text, any box on a RagTime page can contain any of the eight basic elements: text, drawings, spreadsheets, buttons, pictures, graphs, movies or sounds – no moving between different programs to create such items. This also has the advantage of just a single document for each job. Drag-&-drop is implemented fully, and can be used to copy almost any item.

RagTime uses two other important concepts: style sheets and the inventory. Anyone who has ever used a DTP program will appreciate the importance of style



Well charted territory

RagTime offers a multitude of useful tools.

sheets. RagTime takes the idea a stage further, by allowing any attributes to be set as a style: value formats, characters, paragraphs, fills, lines – the list is endless. The inventory is even more useful, as it shows a list of every component in use within the document. Each can be edited within a dedicated window by a simple double-click, or drag-&-dropped into another document, or as a picture clipping on to the desktop.

The eight modules fare well in terms of features. The text processor, for example, offers 18-language support, character and paragraph style sheets, and more.

It also integrates with MacLinkPlus Translators, and the Claris XTND System, to offer an import facility from almost every conceivable source. As for the spreadsheet, the RagTime component has all the functionality you could possibly need. Even the drawing module has more than enough features for business use.

As might be expected from a program aimed at small- to medium-sized businesses, the graphing component is powerful. Half a dozen formats are available, plus the options of 2D and 3D. Choice of placement for legends and titles, position, width and length of tick marks, and position of category titles make this a comprehensive module.

The sound, movie, and picture containers each handle the standard

Mac items. Image-import formats include TIFF and EPS (though not with a JPEG preview), plus most other variants through the translators. But, GIFs are precluded, and JPEGs have to be drag-&-dropped from the Finder. In fact, most images can be placed in this manner – you can even drag-&-drop a movie into a picture box and RagTime adjusts the box automatically.

Full AppleScript support takes the tedium out of repetitive tasks, while contextual menus give access to common functions. Most menus can be torn off and placed anywhere on-screen for ease-of-use. Additionally, full ICC colour management is implemented, with a dazzling number of profiles for both RGB and CMYK.

In terms of output, RagTime has some nice touches. While the standard procedure of page set-up is followed by the print process, there's also the option to 'print 1 (item)' which bypasses this. The Fax option picks up either a FaxSTF or FaxExpress driver if installed, and there's even a Print to HTML option, albeit a very basic one that outputs the entire page simply as a JPEG.

Because it's modular, various add-ons have been developed. One of these, FileTime 4, allows a FileMaker Pro database to be linked with RagTime.

Macworld's buying advice

RagTime is unique. Designed to take the pain out of business publishing, it's an alternative DTP. The learning curve is steep, but given the power of the package, that's hardly surprising. The documentation is superb, and includes a 220-page manual.

There are a few gripes – such as a lack of keyboard shortcuts for Import – but, all in all, it's a decent – albeit expensive – product.

Vic Lennard



Win

... One of five copies of RagTime with Macworld Jackpot. Ring 0900 1010 241 before January 31. Calls cost 60 pence per minute.

Run Windows on your Mac



Virtual PC 3.0

Publisher: Connectix
www.connectix.com

Pros: Good PC performance; AppleScript support; improved sound and video; very stable.

Cons: USB support needs Mac OS 9; hefty hardware requirements.

Price: Windows 98, £149; Windows 95, £120; DOS, £50. Upgrade from VPC 2.1, £49.99.

Star Rating: ★★★★★/8.2

While most Mac owners will admit to loathing PCs and Windows, there are times when not being able to run PC software is a definite disadvantage. On-line banking inevitably requires PC-based client software, and many business applications have no Mac equivalent. Running PC emulation software is by far the most cost-effective solution: enter Virtual PC (VPC). Three variants are available, differing only in the bundled, fully licensed PC system software: Windows 98, Windows 95 and DOS.

Installation is painless. VPC's Setup Assistant provides a step-by-step guide, and the entire process takes only five minutes or so. In fact, my shrink-wrapped copy of Windows 98 has yet to be opened.



Double vision

Virtual PC is a whiz with Mac/PC hybrid CDs. It lets Windows see the PC side, and Mac OS access the Apple part.

Once up and running, VPC's Preferences can be adjusted, such as video memory, modem and the creation of a 'D' drive. Mac folders can be shared – appearing to Windows as extra hard disks – and networking enabled. In essence, Windows 'sees' its environment through a set of disk, card, and port emulations.

VPC 3.0 is certainly an improvement over its predecessor, with a number of updated emulations. For instance, the previously ropey eight-bit sound has now been replaced by the equivalent of a SoundBlaster 16 card, while video emulates an SVGA card with up to 4MB of VRAM. Scripting is now possible through AppleScript support – useful for everything from launching applications to carrying out repetitive tasks – and the Shared IP facility means Internet connection in Virtual PC uses the Mac's settings.

USB support for a wide range of

peripherals is likely to be a main selling point for VPC 3, but, life isn't quite that simple – Mac OS 9 is mandatory for this.

Macworld's buying advice

In testing, VPC 3 coped with everything thrown at it. Over two weeks, neither the Windows nor the Mac OS crashed.

The hardware requirements are hefty: the Windows 98 version needs a G3 and 500MB of disk space, plus 64MB of RAM (although Windows 95 can run on a 180MHz 603- or 604-based machine with 48MB RAM). More memory equates to better performance.

VPC 3 is not intended for games – although Eidos Interactive's Formula 1 ran reasonably well on a 400MHz G3 – but, it's a very good tool for software testing. The Configuration Manager lets you change from one set of preferences to another at the click of a button – moving from Windows 95 to Windows 98 can be achieved inside 30 seconds.

While not a replacement for a real PC, VPC 3 is perfect for fair-weather PC use, and at the kind of price that's difficult to refuse.

Vic Lennard



Win

... One of two copies of Virtual PC 3 with Macworld Jackpot. Ring 0900 1010 242 before January 31. Calls cost 60 pence per minute.

A diamond of an idea



King of Key

Distributor: Mygate (020 8297 9699)

Pros: It's a product of genius – probably.

Cons: Utterly useless; insanely overpriced.

Price: £80

Star Rating: ★/0.0 or ★★★★★/10 depending on your point of view.

Once, I received a Christmas card from a friend in Japan. It depicted the same avuncular, ruddy-cheeked Santa I'd always known and loved – but with a difference: this one was nailed to a crucifix.

Japanese advance

King of Key is from the same school of visionary Japanese logic. The same geniuses who brought us Dance With i (see Reviews, October 1999) and the unforgettable Yes! i Hub have excelled again.

While the card was an eye-popping amalgam of Christianity and popular

Western culture, King of Keys borrows from themes of dentistry and IT vanity: it's a diamond-studded gold tooth for your keyboard.

It's designed as a "home" key for the Wall Street PowerBook G3, and will fit no other Mac model. The home keys are the ones with nipples that are used by touch-typists to keep their bearings. Quite.

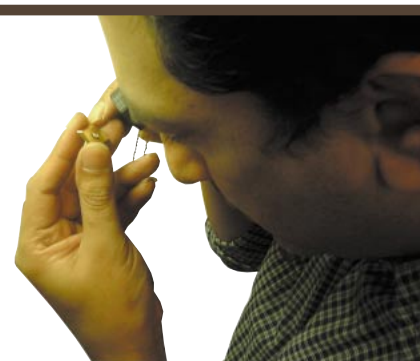
Actually, King of Key isn't real gold, just gold-coloured plastic – although it does house a 24-carat diamond that comes complete with its own authenticity certificate – in Japanese. This rock serves as the home key's nipple.

Because Macworld's offices are next to the Hatton Garden jewellers district, we took the opportunity of having King of Key valued, just out of curiosity. When the



King of kitsch

King of Key is the most pointless bit of genius – ever.



You must be joking

Thanks to the staff at Gold Star for not laughing us out of the shop.

goldsmith had stopped laughing, he declared its diamond to be worth a far-from-regal £10.

Macworld's buying advice

When I fitted it to a sales colleague's Wall Street, King of Key became the talk of her floor. And, in my two years on Macworld, no product has sparked as much banter among the editorial team as this humble trinket trinket.

Sure, it's an absurd square of plastic, housing a £10 stone that happens to cost £80. But, King of Key – we are your unworthy subjects.

Sean Ashcroft

Cracking pinball game



Angel Egg

Publisher: LittleWing

www.littlewing.co.jp

Pros: Plays like a real pinball table; graphically superb; inexpensive.

Cons: Very tough to complete.

Price: 2000Yen (£12) from LittleWing's Web site.

Star Rating: ★★☆☆/8.8

LittleWing has been responsible for some of the Mac's best pinball games over the past nine years, including *Tristan*, and *Loony Labyrinth*. *Golden Logres*, released in late 1998, was a giant leap forwards in terms of graphics, and the heraldic theme made for excellent gameplay. With such a pedigree, *Angel Egg* has a lot to live up to.

Graphically, *Angel Egg* is highly impressive: 16-bit colour, a table optimized for an 832-x-624-pixel display, and lightning-fast screen redraws – smooth and colourful. Technically, it's a three-flipper design with six ramps and bridges, two upper floors, and a three-way nudge.

The theme is of a biblical nature. Playing the part of an angel, you have to help God achieve Genesis, the creation of Earth,



Loadsa balls

Multiball play – with up to six balls flying around at the same time – makes Angel Egg a tough cookie to crack.

summoning the seven Archangels by collecting angels' eggs, and invoking the Spirits of Fire, Water, Earth and Wind.

However, LittleWing has gone overboard on the multiball play aspect. Invoke one of the spirits and a second ball fires up; hit various targets and a third appears. In fact, you can have up to six balls on the go at the same time. This makes *Angel Egg* almost unique among Mac pinballers – and tough to play, for unless multiball play can be mastered there is very little chance of completing the game.

The other important aspect is the three-way nudge. While left and right nudges are usually a nicety, they're essential here, especially to control the path of the ball as it falls from the right upper floor.

Ultimately, reaching Genesis requires the summoning of all seven archangels,

completion of the 'heaven' light sequence, all four spirits invoked, and the lighting up of 'bridge complete' and 'melodies complete' during the course of a multiball play. Big bonuses arise from such achievements.

Macworld's buying advice

In terms of pinball physics, *Angel Egg* is fantastic. With the table filling the height of your screen, the experience is totally enthralling. Flipper reaction is faithful to the real thing, and all the standard arcade techniques – such as holding, dead flipper bounce, and flipper pass – are there.

The attention to detail is impressive – the biblical side has had some serious research, with a lot of thought going into the scenario. Reading the manual is not mandatory, but the scene-setting helps in understanding the order in which the various features must be achieved. Music and sound effects add to the atmosphere, even down to the "thank God" voice-over when a new ball appears on losing one very early in play. At a price that puts many shareware games to shame, *Angel Egg* is a must for pinball fans.

Vic Lennard

Win



...One of 20 copies of *Angel Egg* with *Macworld Jackpot*. Ring 0900 1010 243 before January 31. Calls cost 60 pence per minute.

Consumer colour printer



Canon BJC-6100

Manufacturer: Canon (0500 246 246)

www.canon.co.uk

Pros: Easy to set-up and install; intuitive interface.

Cons: The Epson 740 is better value.

Price: £179

Star Rating: ★★☆☆/6.6

For home use, the Canon BJC-6100 is a good colour printer. It's easy to set-up and the software is a synch to install. Within 15 minutes you are ready to go.

For testing, I began by printing some Word documents, which it handled well – just what you'd expect from a £180 printer.

Speedy

I then ran out a colour-heavy *Macworld* feature page. The Canon was quick and colour-accurate, although images could have been crisper.

Next, I switched from standard ink



and paper to photo-ink and glossy paper – to see what this baby could really do. This is where the Canon began to disappoint.

The inks and paper are expensive, and have to be ordered separately. If your original image and scanning are of a high quality, the BJC-6100 is meant to produce photo-quality prints. It doesn't.

I ran out some high-resolution PhotoDisc images at 300dpi, starting with a view of Florence at dusk. The Canon coped with the brilliant yellows and oranges well, but there were signs of banding.

Another 300dpi image – of Notre Dame – produced no banding, but plenty of graininess, especially in the clouds and sky.

When printing images of people, the BJC-6100 suffered similar problems. This is a big drawback, because home colour-printers are meant to offer a cheap but high-quality way for people to blow-up holiday snaps. Add banding and graininess to red-eye and poor composition, and you've got something fit for the bin, rather than the wall. However, if the originals are good, as mine were, the banding only ruins the picture if viewed at close-quarters.

Macworld's buying advice

I'd love to recommend the Canon BJC-6100 – but there's a problem: for just £20 more, the Epson 740 gives better results.

If all you'll ever need are low-to-mid quality text-heavy print-outs, then this is not an issue. However, once you stray into photo-quality territory, the extra outlay makes sense. After all, if you've already forked out for a digital camera and a scanner, what's another £20?

Woody Phillips

Win



...A Canon BJC-6100 with *Macworld Jackpot*. Ring 0900 1010 244 before January 31. Calls cost 60 pence per minute.

Super-sleek 250MB disk-drive



Zip 250 USB

Manufacturer: Iomega (0800 973 194)

Pros: Nifty thin design; USB makes it ideal for use with an iMac.

Cons: It's slow.

Price: £128; four disks £39.99

Star Rating: ★★ ★/6.8

The demise of SyQuest has left a big chunk of the removable-media market to Iomega. Both the Zip and Jaz formats are widely used, if not always hugely popular. Jaz successfully made the transition from 1GB to 2GB cartridges fairly painlessly – and, now, Zip is moving from 100MB to 250MB.

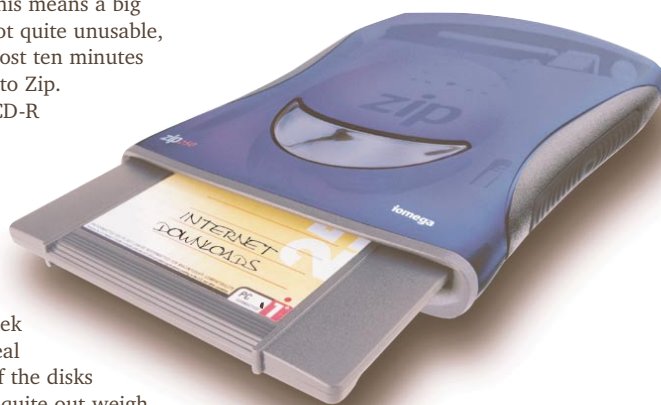
The first thing you notice with the Zip 250 is its new slimline design. It's so sleek that the old design looks positively chunky. The poor old 44MB SyQuest format would look like a dinosaur – if there were any left. Part of the reason for its smaller case is that the drive uses USB to connect to your Mac. The USB interface makes it possible to use it with all of Apple's latest

systems. Unfortunately, this means a big step-back in speed. It's not quite unusable, but a 20MB file took almost ten minutes to copy across from Mac to Zip. Compared to burning a CD-R disk, this is terribly slow. That you can burn a 650MB disk in under 20 minutes using a 4x USB CD-R, shows that USB is not necessarily the guilty party here.

So top marks for a sleek design – but speed is a real problem. The wide-use of the disks is a bonus, but it doesn't quite out-weigh the speed problems. Strangely, copying data from the Zip is much faster. The same 20MB file copied in a couple of minutes.

Well supported

The drive comes with a stand – so you can have it resting on its side – as well as a USB cable and a PC card. At first, I thought this must be a mistake: why supply USB and a PC card? On closer inspection, the PC card attachment proved incompatible with PowerBooks: it is only supported on PC notebooks. This isn't really a problem – if you want to run the drive with a new PowerBook you could use USB. But, the PC card is there whether or not you want it. This must have an affect on price. I would hate to think I was subsidizing a



card for the convenience of PC users. Somebody at Iomega probably figured out that it's cheaper to market a multifunction PC/USB connection than a separate box for each one.

Macworld's buying advice

At £128, the Zip 250 USB is still relatively inexpensive for a removable-media drive. But, it may be worth investigating a USB CD-R as it's faster and the media is cheaper. If you already use a Zip 100 it makes sense to stick with the standard – but be prepared for a sluggish replacement.

David Fanning

Old-skool drive likes floppies



SuperDisk USB Drive

Manufacturer: Imation (01344 402 200)

www.superdisk.com

Pros: Looks good; quick.

backwards-compatible with older floppies.

Cons: Only 120MB per disk; extremely limited compatibility.

Price: £129; two disks, £13; five disks, £30

Star Rating: ★★ ★/6.0

When I received the latest version of Imation's SuperDisk USB floppy drive for review, you could have cut the atmosphere in our office with a sponge. It'll be limited, slow, ugly and noisy, I thought. But, it was only two of these things.

Imation's SuperDisk USB Drive is actually a good-looking piece of kit. It has an opaque plastic surround, and is reasonably sleek – although not nearly as cool as Iomega's Zip 250 USB drive (see above). Imation has even re-designed the disk to look more millennial.

Installing the driver software is a snap: just open the file, click install, and, in the blink of an eye, you're ready to go.



More important than looks and ease-of-installation, though, is performance. Here, the SuperDisk Drive is excellent. It took me just over five minutes to copy a 114MB *Macworld* file – compared with ten minutes for *Macworld's* deputy editor to download a 20MB file using the Zip 250. Copying the same file back from the disk was even quicker, at just over three minutes.

Limited capacity

The thing with SuperDisk is that it's extremely limited. Despite its speed, capacity is a problem. With just 120MB per disk, you would need a mountain of SuperDisks to archive anything that is graphics-heavy. It's the lowest of the low-end storage solutions. The Zip 250 beats it hands-down on capacity – although it lacks the SuperDisk's floppy compatibility.

Compatibility, though, is the biggest issue. How can you use SuperDisk for data transfer if you're the only person within a fifty-mile radius who's got one? I don't know anyone – including home

and PC users – who uses SuperDisk.

Also, I found the drive too noisy – it whirled, clicked, and clunked constantly, just as you'd expect a floppy drive to.

Of course, there are still uses for floppy drives, but they are becoming few and far between. Yet, even now, we get printers with drivers on floppy. The solution is not really a floppy-compatible drive, like the SuperDisk, but to use products that are up-to-date with Mac support. If the driver is on a floppy it's unlikely to have been tested with Mac OS 9.

Macworld's buying advice

The SuperDisk USB Drive isn't a bad product: it's quick, it looks good, and it's easy to use. It does however, lose out big-time to the Zip 250 – on price, capacity, compatibility, and design.

If all you want to do is back-up small files and not send them anywhere, then maybe this is the drive for you. Though for an extra £100 a CD-R would make a better back-up drive. On the other hand, if you need to read an old-style floppy that's been lying around the office for the last few years, the SuperDisk could be the answer. If not, I'd go for the Iomega Zip 250 USB.

Woody Phillips

Buxom-Barbie with attitude



Tomb Raider III

Publisher: Aspyr Media
www.aspyr.com

Pros: Improved graphics; realistic sound and environments; bigger monsters; easier to play than version II.

Cons: Needs Rage Pro or OpenGL to make the most of the graphics.

Price: £44.99 (inc VAT)

Star Rating: ★★★★★/8.2

Lara Croft, in her third action adventure, has finally returned to the Mac. And it's worth the wait. Now, I'm no Lara Croft fan – the big-boobed, gun-toting Barbie doll is more a bloke's fantasy than a modern woman's role-model – but I love Tomb Raider. It's the only game that lets me race through a fantasy world where I get to kill scary animals, such as snakes and lions. And very satisfying it is too. Tomb Raider III is even more addictive and exciting than the previous versions. It's just a shame Macintosh users have had to wait this long.

Porting a game like Tomb Raider to the Mac, with its glossy graphics and fascinating effects, was no easy job. To appreciate the complexities, visit www.tombraiders.com, where there's a brief interview with Ken Cobb of West Lake Interactive. Cobb reveals that, aside from additional support for OpenGL, there were several specific extras added to the Mac

version. West Lake has, for example, improved the preferences, so you can increase the amount of gore.

If you've got the latest professional Mac with OpenGL, or an iMac with Rage Pro, the graphics and scenery look stunning. The architecture of the buildings is much more detailed, and the textures have also been improved. If you're unsure how to get the best from the game's graphics on your Mac, run the Set Up application that comes with Tomb Raider to configure your machine correctly.

Unlike previous adventures, you can play some of the levels in any order you like. Luckily, you can still save whenever you like, and you'll need to – frequently. The cheats and fancy moves, like the swan dives and skids, are all there, and the adventure itself will keep you glued to your chair in anticipation.

There are now more sophisticated ways to manipulate Lara's movements. She can duck to avoid bullets, or to crawl through low passages, and an extra spurt of speed can get her out of many difficult situations. She can even perform a monkey-swing across bars, or hang underneath railway sleepers. Add the fun of all the new vehicles, like a quad bike and kayak, and you are ready to tackle any enemy.

Version III also has vastly improved lighting, with multi-coloured effects and spooky shadows. There are also weather effects, like rain and snow, and more realistic fire effects for explosions. On top of this, transparent water effects – like splashes, ripples and waterfalls – make the game feel even more real. Lara also gets to use new guns – including a rocket launcher, a semi-automatic, and a Desert Eagle. The only problem is deciding what to wear when taking on those

monsters; what's a girl to do?

I would give greater detail about the actual levels, but I'm still struggling through level two after four days' trying. Not that it's incredibly difficult – it's just that I've spent loads of time exploring, though it does take a few attempts at the swan dive to get past those vicious piranhas. Wish me luck, and where's that Lucozade?

Macworld's buying advice

If you're not a Tomb Raider addict, this may be the version to hook you. But, don't take my word for it – check out the demo on this month's *Macworld* cover CD.

Gillian Robertson (pictured below)



Kids' favourite ports to the Mac



Spot's Busy Day

Publisher: Europress
www.europress.co.uk

Distributor: High street outlets.

Pros: Nice balance of stories and interactivity.

Cons: Mum or dad need to remain close-at-hand.

Price: £19.99

Star Rating: ★★★★★/7.9

Spot the Dog is the Harry Potter of its genre: to date, 30 million Spot books by the children's author Eric Hill have been sold worldwide. Now, the loveable scamp's antics can be enjoyed on CD.

Spot's Busy Day is a collection of four stories, that include him helping to bake a cake and enjoying his first day at school.



Spot of rain

Spot's Busy day features loads of interactive elements.

Each story is interactive: kids can clothe Spot for rainy weather, or pick ingredients for baking a cake.

Because the title is pitched at three-to-six year-olds, I enlisted the help of my nephew, Kieran – a typical four-year-old. After helping me with this review, he went to a birthday party – where a combination of cakes and a bouncy castle had him chundering in a church hall. Pre-vomit though, he enjoyed Spot's Busy Day.

Spot's Busy Day isn't intuitive for toddlers, and not always for adults. A key feature is that kids can bypass story lines and head straight for the interactive stuff (presumably for when the stories are wearing thin). But, this wasn't mentioned in the read-me file or on the CD itself.

The bottom line is that, unlike books, children's CD titles demand a degree of computer know-how. Kieran was fine with the spoken instructions, but there was an awful lot of interactivity that would have passed him by without my promptings.

There are plenty of nice touches that young children will love. The highlight for Kieran was helping Spot and his pals join their piano-playing teacher by clicking on the instruments they were brandishing.

Macworld's buying advice

As long as you plan to remain hunched over your child's shoulder while Spot is in the CD caddy, you'll get excellent value from your £20 outlay.

Sean Ashcroft and Kieran Rogers (aged four).

Lightning-quick, high-quality camera



PhotoPC 800

Manufacturer: Epson
www.epson.com

Pros: Small; high-resolution; USB-equipped; comes in a fleece pouch.

Cons: The Plain Jane of digital cameras.

Price: £458

Star Rating: ★★★★★/8.7

The digital-camera market has been in limbo for much of this year. Each manufacturer appeared to be waiting for the right time to dip its toe into the USB market. At the same time, cameras with two-megapixel capability became common. This left snappers downloading huge files, using an ancient serial connection. This experience is excruciating – remember, if you are old enough, downloading an 8MB file using a 14,400bps modem. Yuck.

The PhotoPC 800 boasts not only a two-megapixel image, but USB connectivity. Now, downloads are almost instantaneous.



The PhotoPC 800's resolution is 1,600-x-1,200 pixels in fine mode. However, Epson has used a new technology it's calling HyPicT, that enables a resolution of 1,984-x-1,488 pixels. The results are impressive although this must be an interpolated image. The resulting pictures are close to three megapixels in size.

Point-&-click

The controls are extensive, but unobtrusive. You can just point-&-click most of the time, but you also have access to more advanced features. You can control shutter speed, ISO equivalent sensitivity settings, auto and manual focus, and electronic iris control. You may not use most of these settings, but it's good to have them just in case.

The camera needs just two rechargeable batteries – though it comes with four – and

a charger. The two batteries make the camera smaller and lighter than its predecessors – though, I prefer the single-cell options offered by Sony and Fujifilm.

The camera is of a traditional design, and looks like a regular 35mm camera – with the exception of the 1.8-inch LCD screen on the back. As the owner of a digital camera that uses a distinctly digital design, I enjoyed the anonymity of the PhotoPC 800 – it's not for show-offs.

The Epson software bundled with the camera is also good: a simple interface with quick downloads; Epson Photo!Print; Photo! 3 and Mr Photo; plus Adobe PageMill for Web development. These packages might not be your first choice for image editing, but at £458 you can't complain. If you are really serious about image editing, you'll have to buy your own high-end software.

Macworld's buying advice

The PhotoPC 800 looks too small and neat to be capable of such high-quality pictures, but it's an impressive camera. It's small enough to carry anywhere and powerful enough to create great images – on top of this the USB is fast enough to make downloading hi-resolution pictures a real snap.

David Fanning

Easy-to-use consumer scanner



Agfa SnapScan Touch

Manufacturer: Agfa (0181 231 4905)
www.agfa.co.uk

Pros: Packed with time-saving features; gives high-quality scans.

Cons: Ugly; poor image-editing software.

Price: £159

Star Rating: ★★★★★/7.7

Maybe a week's a long time in politics, but it's even longer in the world of scanners. The SnapScan offers everything you're ever likely to need from an entry-level scanner: good-quality scans; intuitive and time-saving features; image-editing software; and it's comparatively small.

But scanner technology is so well established, that we're spoiled for quality of choice. Unluckily for Agfa, last month I reviewed the CanoScan FB 636U (December Reviews, page 61). As impressive as the Agfa is, its Canon counterpart beats it hands-down in most departments. If it hadn't been for this, the SnapScan would have wowed me more than it did.

Don't get me wrong – the Agfa has plenty going for it. "Smart" buttons on its front allow one to send images straight either to a printer, to an email app as an attachment, to image-editing software, or to an optical character-recognition (OCR) device. I liked that.

The SnapScan's software, ScanWise, is also a potent force. Not only can it automatically re-align poorly placed pictures, but its multiple-selection mode allows for batch-scanning of images, even if you want each to have different scanning settings. Handy.

And the Agfa is a feet-up machine: ScanWise checks if images are colour or black-&-white, and will colour-balance them if necessary; its built-in PhotoGenie software enhances detail and colour; and Agfa Color Management colour-corrects while you output images for printing. Very nice too.

And, with a maximum resolution of 600-x-1,200 pixels, the SnapScan gives you all the scanning quality you'll need at this level. I was quite happy to include a couple of pictures in this month's *Macworld* that I scanned using the SnapScan (see the *Dummies* book images on page 105).

But, the scanner's designers must have eaten Lego for lunch, because it's blockier than Blockie the Blockhead from Blockland. In their defence, though, they have given some thought to iMac owners (old and new), by providing an "icolour" range of clip-on, scan-hood handles.



The CanoScan, on the other hand, is a marvel of modern design.

And then there's the image-editing software. The SnapScan comes bundled with MicroFrontier's Color It!, which is poor, offering nothing but sketchy image-editing capability.

The Canon, though, comes with Adobe PhotoDeluxe 2.0, which offers Photoshop-style image-manipulation, an abundance of stock images, plus the facility to create greetings cards, calendars and stationary. For many purchasers of low-end scanners, the family-fun/domestic-tools thing is a real plus. Color It! is about as much fun and use as a cracked glass eye.

Macworld's buying advice

The SnapScan Touch is a good scanner with plenty to commend it. It's unlikely you'd be disappointed with your purchase. But, at £50 less, the CanoScan is far sleeker, needs no mains connection, has better software and offers comparable scanning quality. Maybe Harold Wilson came back as a scanner techie.

Sean Ashcroft

Footie management game: do we like this!



Championship Manager 99/00

Publisher: Feral Interactive

www.feral.co.uk

Distributor: Gauntlett (01908 575 600)

Pros: Barcelona 0, Chelsea 1

Cons: Chelsea 1, Arsenal 2

Price: £35 inc. VAT

Star Rating: ★★★★★/8.5

Football, yes. Jumpers for goalposts. Greatest game in the world, isn't it? Is it? *Fast Show* Ron Manager or jewellery-clad Ron Atkinson, you probably fancy yourself cutting a fine figure in sheepskin coat on *Match of the Day*.

Despite all the pressures, bad haircuts and chairmen's votes of confidence, the tremendous success of newspaper Fantasy Football games proves that many of us would gladly swap our long-trousered jobs for the dugout hot seat. Linesman!

For years, PC users have enjoyed a bootroom full of football-manager games. But the Mac's managerial dressing room has remained empty – do we not like that! Wannabe Apple soccer supremos have cried like Paul Merson for one of these games to be transferred to the premier league of Mac games. Finally, Feral Interactive has swooped on Sport Interactive's Championship Manager 99/00. Kick off!

CM99/00 is not a game of two halves: Mac and Windows versions are functionally identical, with the same easy-to-navigate interface, exciting gameplay and dense database on both versions.

Football's a global business nowadays, and CM99/00 gives you all the teams from 16 major leagues around the world: England, Scotland, Italy, Spain, France, Germany, Belgium, Netherlands, Sweden, Denmark, Portugal, Norway, Argentina, Brazil, Japan and the USA. And then there's all the domestic and international cup competitions. The John Motson-like mass of data is incredible, with detailed profiles and histories of over 4,000 clubs, 50,000 players, managers, and coaches.

Monster! Monster!

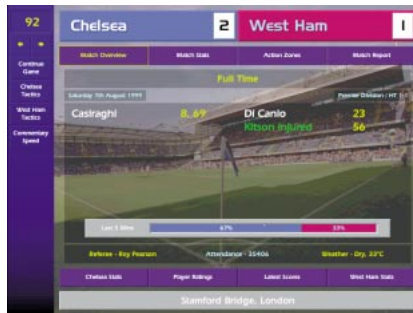
Unlike Fantasy games, CM99/00's depth of data offers hours of intricate gameplay. With the former, you spend a few weeks pouring over player prices, and then it's feet-up time with the papers all season. In CM99/00, you have to use your club's reserve/youth teams to groom tomorrow's stars and magic-sponge injured players.

A fully fledged transfer system – Juve bought di Matteo off me for £10 million! – features all the big-money dealings of



Here we go! Here we go! Here we go!

Clock(dennis)wise: Change team formation, make substitutes during each game; consult your club's team sheet to check who's injured and even unhappy; players are rated for 35 individual attributes; a fit Casiraghi – what if?



modern-day negotiations, although no bungs came my way in motorway service-station car parks.

Player power raises its ugly head in CM99/00. Prima-donnas can get stroppy. How would you handle an Anelka in your dressing room? CM99/00 helps you find out. Maybe you'll fine him, double his wages, or drop him into the reserves. Get it wrong, and you'll be as sick as a parrot. Steer clear of Stan Collymore and all those fancy-dan foreigners.

Badger your club's directors for extra cash for transfers, increased wage bills, even improvements to the club's youth and training facilities. The board hires and fires, but watch for restless supporters chanting your name if results don't go the right way week after week.

On top of all the players' stats and club finances, CM99/00 includes full statistical analysis of every league's referees – including yellow and red card counts.

Match simulations are text-based, speechless radio-style commentaries – "Poyet picks up the loose ball", "Ronaldo runs into Lehouef", etc. Forget in-game graphic highlights, watching your team fall to pieces on an icy night in Leicester is even more nerve-wracking here than sweating for scores on Ceefax's InVision in real life. But CM99/00 sounds super, with all the usual "oohs" and "arghs" from the crowd.

Change your team's tactics and substitute players at any point of the game. Trailing 2-0 to Man Utd, I put on three strikers to snatch a heroic draw. The lads done great. The board were even more ecstatic when my Chelsea team qualified for the second phase of the European Champion's Cup. CM99/00 boasts a Venables-like variety of pre-defined tactics (4-4-2 Diamond, 3-5-2, Sweeper, etc),

or you can create your own custom formations. Take each game as it comes, go out there to do a job, and get a result.

What's the point of paying a player's wages if he couldn't hit a cow's arse with a banjo? Successful managers are always on the look-out for new talent, and you'd be advised to send your scouts across the globe to find tomorrow's stars. Transfers are fun, but getting your hands on Batistuta, Rivaldo or Vieri isn't easy – Jordi Cruyff comes cheap, though. Pray your club's board is liberal with the lolly.

Like all modern managers, you mustn't forget to set up rigorous training schedules to improve individual players' skills. The next version will probably have you setting the menu in the training-ground canteen, and sending your star players to rehab.

Up to 16 players can participate in a game on one Mac, or via a local network. Getting the ball in the back of the (Inter)net is another – very slow – possibility. Unrealistically, Dennis Bergkamp will be able to perform via Apple's wireless AirPort.

Macworld's buying advice

At the end of the day, CM99/00 is more Teddy Sheringham than Michael Owen – gameplay is a whole season, not 90 minutes. Starting a new game takes about six minutes, and you'll need 128MB of RAM to take full advantage.

If you prefer a more-dynamic player-manager's role, there's still no match on the Mac for PlayStation footie games. But if you've got the spare time – hello, Ruud Gullit and Roy Evans – you'll be over the moon with the Mac's transfer of CM99/00. **Simon 'The Gaffer' Jary** Play Championship Manager 99/00 with our exclusive sound-enabled playable version on this month's CD!



PowerPC G4 upgrade cards



MAXpower G4/400MHz PCI G4/400MHz ZIF

Manufacturer: Newer Technology
www.newertech.com

Distributor: AM Micro (01392 426 473)

Pros: Fast; needs no software to run.

Cons: Expensive.

Price: PCI, £599; ZIF, £589.

Star Rating: PCI, ★★★★★/7.6; ZIF, ★★★★★/7.5

Crescendo G4/400MHz

Manufacturer: Sonnet
www.sonnet.com

Distributor: Computers Unlimited
(0181 358 5858)

Pros: Fast; purple heat-sink (cooling element).

Cons: Expensive.

Price: £599

Star Rating: ★★★★★/7.4

MACH G4/400MHz

Manufacturer: Interex Europe\XLR8
www.xlr8.com

Distributor: Channel Dynamics
(0870 607 0540)

Pros: Fast.

Cons: Very expensive.

Price: £699

Star Rating: ★★★★★/7.2

The Apple range of G4 Power Macs is just making it to market, and, as usual, the upgrade manufacturers are just behind them. All the usual suspects – Newer Technology, Sonnet and XLR8 – are shipping G3 Power Mac upgrades.

Modern upgrades come in two types: either a ZIF (Zero Insertion Force) upgrade – which is basically a processor on its own; or a daughter (or carrier) card – which holds the processor. All G3 models use a ZIF method of upgrading, while older models, such as the 7500, 8500 and 9500



series, use daughter cards. One company has found a novel solution to the problem of redundant upgrades. When you upgrade a G3/233 for example, you are usually left with the old ZIF card. XLR8 offers a daughter card (MACH Carrier, £149) that can be used to hold an old ZIF card, allowing it to be used in older PCI Macs.

The carrier card means that when you upgrade one machine, you can also allow older machines to reap the benefits of redundant processors. This makes upgrading more cost-effective.

The decision to upgrade is not straightforward. With G4 upgrades priced at more than £500, the cost is almost half that of a new machine. When you buy a new G4 Power Mac you don't just get a faster processor: you also get USB and FireWire ports, at least a 10GB hard disk and an ATI Rage 128 graphics card. The performance is way above a beige G3/233 – but it's down to more than just the processor.

Simply upgrading the processor on an old machine is a cheap option, but adding other features – like an extra hard disk, graphics card and FireWire – will set you back more than another £500. Even with these add-ons, performance still won't match a G4 machine, because the G4's logic board is so much faster.

Over the past year or two, the biggest speed improvements have been in graphics, rather than processors. Although processors have improved by 100 to 125 per cent, graphics speeds have improved by 350 per cent. If you want real G4 Power Mac, a graphics card is your best bet.

That said, some applications – such as RIPs – need raw processing power, and the G4 upgrades certainly have that. Similarly, rendering video, or 3D ray-tracing, is very processor-intensive and could benefit from the G4 upgrade.

Upgrading the blue-&-white G3 Power

Macs should be a simple task, but Apple put a spanner in the works. Installing the ROM upgrade on your G3 – as Apple advises – it actually stopped it from being G4 upgradeable, at least for a while. This is widely rumoured on the Web to have been a ploy to stop G4-upgraded Macs appearing before the real G4 Macs hit the streets. However, a simple software fix undoes the damage.

Much fuss has been made by Apple over the Velocity Engine – previously known as AltiVec. The Velocity Engine is a 128-bit super-fast vector processor, that has been added to the G4. In theory, the Velocity Engine will speed-up all kinds of things – such as Photoshop filters and rendering. In practice, however, even using a Power Macintosh G4, results have been patchy at best.

An upgrade in its most basic form is just a processor, and is really no different from those found in real G4 machines. They all come from the same original source – Motorola – and go at the same speed. Making a decision is straightforward when buying ZIF upgrades – get the cheapest.

Daughter-card models are more tricky to choose. All manufacturers have software to drive the cards, but Newer cards will work without the software. It has hardwired the information to tell the logicboard that an upgrade is present.

Newer claims that this avoids corruption that can happen with other daughter cards during start-up. Other manufacturers rely on software to set the daughter card upgrade – but until the software loads, the machine doesn't realize an upgrade is present. I wouldn't claim 100 per cent stability for any of the cards tested, but none were worse than the original processor.

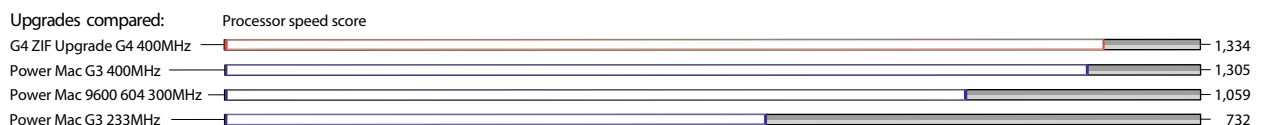
Macworld's buying advice

If you are looking for a small speed increase, these cards can help. To make your machine considerably faster, you will need a graphics card and faster hard drive. If you need this, you should compare the price of a new G4 Macintosh. Daughter cards are helpful when you need to spread the wealth to a number of older machines. They also help when upgrading on a tight budget.

David Fanning

Making the upgrade

Best results in test. Longer bars and higher marks are better.



Behind our tests

This chart shows the processor score only, which is one third of the usual overall score. The G4 ZIF upgrade was in a blue-&-white G3 case. Installing the same upgrade in other models will provide different results. The tests do not use the Velocity Engine, when more applications that take advantage of this become available, you may see further enhancements with the G4 processor.



Games Hall of Fame

Our annual list of the best in Mac gaming. **By Christopher Breen**

It's been a great year for Macintosh gaming. Breaking the trend of recent years, new Mac games appeared on store shelves with remarkable regularity. When not otherwise occupied releasing these new games, companies such as MacSoft, Aspyr, Graphic Simulations, Bungie, Sierra, and LucasArts announced a seemingly endless string of titles that would appear in Mac-compatible form. So, this year's Mac Games Hall of Fame is full to bursting...

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BEST FLIGHT SIMULATION

Falcon 4.0

Star Rating: ★★★★★/8.8

Like many varieties of games, flight sims have been under-represented on the Macintosh. While both Graphic Simulations' F/A-18 Hornet and Parsoft's A-10 Attack are fine combat flight sims, they've got a bit long in the tooth. It was time for something fresh – and along comes MacSoft's Falcon 4.0, an ultra-real F-16 simulation.

Falcon 4.0 is truly hefty: it has hefty hardware requirements; a hefty theatre of operations (the Korean peninsula); and, at 600-plus pages, a hefty manual. Given this enormous tome, it should come as no surprise that this bird is a challenge to fly, land, and fight; mastering the game is a task that takes weeks rather than hours. But the rewards are generous. If you want to have a fair inkling of what flying a modern jet fighter is really like, getting a grip on all that Falcon 4.0 offers will do a lot to further your education. There simply isn't a more realistic combat sim on the Mac today.

Before hopping into Falcon 4.0's cockpit, make sure your Mac has 3D-acceleration hardware. Although the game doesn't require this hardware, Falcon 4.0 is breathtaking with a Rage 128 chip or some variety of Voodoo card. Full review, *Macworld*, September 1999.

Why it's cool: The next best thing to the real thing.

Who it's for: Virtual pilots who are willing to devote lots of time.



Publisher: MacSoft; www.wizardworks.com/macsoft

Distributor: Softline (01372 726 333)

Price: £34

BEST REAL-TIME STRATEGY GAME

Myth II: Soulblighter

Star Rating: ★★★★★/8.8

Last year we flagged Myth II: Soulblighter – the sequel to Myth: The Fallen Lords – as a hopeful for 1999 with good reason. The original Myth was an outstanding real-time war game that afforded the

opportunity to command the legions of the Light in gorgeous 3D landscapes. Though the sequel does allow us to renew our battle with the forces of the Dark, Myth II is much more than just a rehash.

The original elements of the game remain – success comes to those who master the art of reconnaissance, learn the benefits of varying troop formations, and hold the high ground. Myth II adds enhanced graphics, a simplified interface, indoor environments, augmented character classes and weapon sets, and expanded network play.

In addition, new tools let you create and modify maps and characters. Typical Myth II players probably won't use these complicated tools, but every player can benefit from the fruits of another's labour. As a result, you can download fan-created Myth II scenarios, such as the ones that put you in command of a WWII army or of troops that would appear more at home in a Lego set. It's a great game that keeps on giving. What more could you ask for? Full review, April 1999. Play the demo on *Macworld's* cover CD, March 1999.

Why it's cool: Lovely landscapes, bloody battles, realistic combat tactics.

Who it's for: Would-be generals who don't mind spilling their troops' blood, as long as the other side spills more.

Publisher: Bungie Software; www.bungie.com

Distributor: Softline (01372 726 333)

Price: £34



BEST SHOOT-'EM-UP

Quake II

Star Rating: ★★★★★/7.3

Id Software does one thing: 3D shoot 'em ups. But it does this one thing very well indeed. The developers at Id originally created Quake II for the PC over two years ago. It's been a really long wait, but 1999 finally brought Quake II to the Macintosh.

If you've played any variety of first-person shooter, you know the basics of Quake II – shoot anything that moves, and, unless you've reduced your target to its component parts, shoot it again for good measure. This is particularly important in Quake II because most of the baddies, if left in one piece, issue a powerful final blast before shuffling off this mortal coil.

Quake II is yet another game that benefits from 3D-acceleration hardware. Not only does the game take on a more lushly menacing appearance when run through a Rage 128 or Voodoo card, but the



frame-rate picks up significantly as well.

Quake II doesn't offer a storyline any more compelling than the original Quake's, but network gaming benefits from the same enhancements found in the single-player game – a slew of new weapons, the ability to duck, and a wider variety of maps. In either single-player or multi-player mode, for careering-through-corridor-carnage satisfaction, Quake II is a must-have. Full review, December 1999. P

Why it's cool: Well, it's Quake, for cryin' out loud!

Who it's for: Fans of first-person shoot 'em ups.

Publisher: Activision; www.activision.com

Distributor: Softline (01372 726 333)

Price: £35 inc. VAT

BEST WORLD-BUILDING SIMULATION

Caesar III

Star Rating: ★★★★★/8.0

If you wanted to escape this hurly-burly world temporarily for one of your own design, 1999 was the year to do it. Three solid world-builders found their way to the Mac this year: Electronic Arts' SimCity 3000 (available in the UK only via <http://shop.ea-europe.com/> for some silly reason); PopTop Software's Railroad Tycoon II; and our next inductee, Sierra's Caesar III.

Caesar III is more than just SimCity with a toga. This delightfully entertaining simulation allows you to build your very own Roman Empire. In the process, you must contend with structures that routinely collapse, denarii-pinching emperors who keep a watchful eye on your budget, a populace that demands high-priced entertainment – and finicky gods who you must placate and please. Caesar III's graduated, mission-based play allows you to dive quickly into the game. As you grow from lowly Citizen, building a backwater province to Emperor of Rome, new challenges unfold. And, unlike SimCity, this game actually makes it possible to win.

Of course, if you'd rather not pursue a career in government, you're free to build and manage a Roman city with Caesar III's City Construction Kit. Either way you play, it won't be long before you, too, join legions of other Macintosh users and shout, "Hail, Caesar III!" Full review and playable demo on CD, *Macworld*, October 1999.

Why it's cool: Good graphics; challenging game play; you can actually win.

Who it's for: Those who wish to discover whether you can build Rome in a day.

Publisher: Sierra On-Line; www.sierra.com

Distributor: Softline (01372 726 333)

Price: £34



The 1999 Macworld Game hall of fame



Special Awards

The Macworld Games Hall of Fame demands that we give credit where credit is due, and so we'd like to acknowledge the following:

BEST MAC GAME SUPPORTER:

Apple Computer

It would have just been another mediocre year for Mac gaming without the tireless efforts of Apple's game group. These folks made sure the best games came to the Mac, and nudged their colleagues to provide hardware powerful enough to play those games.

BEST HARDWARE ACHIEVEMENT:

ATI Technologies

Apple's Power Macintosh computers finally shipped with robust 3D-graphics hardware – ATI's Rage 128 chip-set. Users wishing to play RAVE and OpenGL games on PCI Macs can get the same acceleration with ATI's Rage Orion card.

HARDWARE ACHIEVEMENT:

3dfx

For Glide games, you must have a card with one of 3dfx's Voodoo chips. Thankfully, because 3dfx has released Mac-compatible Voodoo 2 and Voodoo 3 software, Macintosh users no longer have to pay a premium for special Mac versions of these cards. Of course it's a strategy designed to sell more 3dfx products, but who cares? We can finally get great hardware acceleration for the same prices as our PC counterparts.

BEST INTERNET GAMING ACHIEVEMENT:

GameRanger

Macintosh gamers now have a Mac-specific online gaming service, thanks to Scott Kevill's GameRanger (www.gameranger.com). With GameRanger, an Internet connection, and a copy of your favourite network game, you're never at a loss for online opponents.

BEST PORTING HOUSE:

Westlake Interactive

It's no secret that most games appear first on the PC. Someone must port those games to the Macintosh, and the people who do it best are Mark Adams and the crew at Westlake Interactive (www.westlakeinteractive.com).

BEST NETWORK GAMES

Quake III: Arena; Unreal Tournament

After weighing the pluses and minuses of each game, we agreed that both these games kick serious patoot.

Fans of Id Software's frantic network-gaming style will love Quake III: Arena. The action is fast and furious, and the levels are nicely designed. Id has done a beautiful job with the game's lighting effects, and, when you take out an opponent, he or she explodes in a gratifying shower of gore.

And what about Unreal Tournament (demo on this month's CD), released in the UK last month? Well, it doesn't offer quite the frenetic experience of Quake III: Arena, it does contain a vast collection of gloriously rendered levels, has a wide variety of games, and includes some intriguing new weapons. Both games feature a single-player mode with bots whose AI (finally) has more in common with human behaviour than with that of department store mannequins.

These games demand fast hardware – a G3 at least – and you should play both with hardware acceleration. If your Mac meets these requirements, get both.

Why they're cool: Great graphics, frantic action.

Who they're for: Network gamers who have a healthy bloodlust and serious hardware.

Publisher: Activision (Quake III); www.activision.com

Distributor: Softline (01372 726 333)

Price: £34

Publisher: MacSoft (Unreal Tournament); www.wizardworks.com/macsoft

Distributor: Softline (01372 726 333)

Price: £34



BEST ARCADE GAME

Bugdom

Star Rating: ★★★★★/8.0



Brian Greenstone and his pals at Pangea Software have a tradition of making attractive games – Weekend Warrior; Nanosaur; and the great Power Pete. Pangea's latest effort is, quite literally, cute as a bug, and, as such, couldn't have a more appropriate name: Bugdom.

Bugdom's goal is simple. In the guise of Rollie McFly, a colourful roly-poly bug, you must help free the ladybugs captured by ne'er-do-well fire ants under the control of King Thorax. To do so, you rush around the ten levels of Bugdom (these include The Lawn, The Pond, and The Forest) kicking down the spiderweb cages that contain the fair ladybugs, all the while avoiding or attacking your insectoid – and in The Pond, your piscine – opponents. No one does RAVE hardware acceleration better than Pangea, and it therefore comes as no surprise that Bugdom is lovely to look at. But the game does require some variety of ATI 3D-acceleration hardware. If your Mac lacks it, you can get it by adding ATI's Rage Orion video card to your PCI-based Power Mac. Bugdom's action is frantic enough for hard-core arcade gamers, yet non-violent enough for children. And, it's available only on the Mac. Play the demo on Macworld's CD, September 1999.

Why it's cool: Wonderful graphics, fast action, appropriate for kids.

Who it's for: Arcade-game fans with RAVE hardware acceleration.

Publisher: Pangea Software; www.paneasoft.net

Distributor: Softline (01372 726 333)

Price: £30

BEST SPORTS GAME

Championship Manager 99/00

Star Rating: ★★★★★/8.5

We've waited far too long for a football-management game to come over to the Mac, so thank Bobby Moore that we now have the best. There's more real football data here than in a Rothmans Football Year Book. With the facts at your fingertips, you guide your chosen club to league and cup success. Gameplay is rather slow and memory requirements are high, but who said being a football manager was easy? Ken Bates? Choose from the leagues in 16 footballing nations, from Grampus Eight to AC Milan. Read the review on page 65. And play our exclusive demo on this month's CD.

Why it's cool: Best football-management game hits the Mac.

Who it's for: Those who've been dying for Mac sports games.

Publisher: Feral (0171 610 8801); www.feral.co.uk

Price: £35



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BEST TRADITIONAL GAME



Deathground

Star Rating: ★★★★★/8.0

For those who find its ultra-violent title offputting, let me explain something: Deathground is, in essence, the board game Risk, but set to a 1920s gangster theme. Although the game can take place in the New York boroughs, or – like its Parker Brothers counterpart – across the globe, it's basically the game we all grew up with.

"What about the humorous dialogue?" Bert challenged.

"Well, yes," we conceded, "the game does play funny sound bites when someone gets rubbed out."

"And don't forget the special rewards that provide players with additional troops or randomly rub out a few of another player's troops."

"Okay, Bert," we sighed, "it's not exactly Risk, but it's close enough for us and we all love the game, so pipe down, ya big lug."

Find out yourself, by checking out the demo on this month's Macworld cover-mounted CD.

Why it's cool: It's funny, it's challenging, it's Risk.

Who it's for: Traditional gamers who can never gather enough friends to play the board game.

Publisher: Freeverse; www.freeverse.com

Distributor: Softline (01372 726 333)

Price: £20; available online only.

BEST ADD-ON

Starcraft: Brood War

Star Rating: ★★★★★/8.0

Add on scenario packages are typically no more than a regurgitation of the original game – but there are rare exceptions. One outstanding example is Blizzard's Starcraft: Brood War. It is an expansion-set that actually improves on Starcraft – one of the greatest real-time strategy games to come to the Mac. How could Blizzard enhance a game so fine that we inducted it into last year's Games Hall of Fame a full six months before its final release? Let us count the ways.

To begin with, Brood War increases your strategic options by introducing new units to Starcraft's three races. The Terran's Medic unit, for example, can heal your marines and blind your enemies with a flash-grenade launcher. In addition, the game's cut scenes are up to Blizzard's usual brilliant quality, and the storyline may be even more compelling than the original. Finally, because Brood War is an add-on that requires you to have Starcraft to play the game, Blizzard rightly expects that you've worked your way through Starcraft's harder missions. So, though Brood War is more difficult than Starcraft, with that difficulty comes the knowledge that you've completed some of the toughest missions Blizzard could design. Not a bad reward from a simple add-on, eh?

Great Contenders

Bungie Software is becoming a byword for quality shoot 'em ups and fantasy adventure games.

Bungie's Halo, a beautifully rendered third-person war game, is on track to be everyone's game of the year – regardless of platform – in 2000. This 3D, hardware-dependent game, featuring both single-player and multiplayer modes, takes place on an artificial, ring-shaped planet and pits humans against an alien race. Both races have access to a remarkable array of weapons and vehicles. Unlike many current network games, Halo focuses on co-operative play. Bungie remains uncommitted to the number of players the game will support, but the company assured us that no fewer than 32 people will be able to play at the same time.

Dynamix joins the co-operative network-game action with its Tribes 2.

Like Halo, Tribes 2 has beautiful graphics, includes vehicles you and your pals can fool around in, and even stresses co-operative play in its network mode. It will also include a single-player game featuring bots.

Terminal Reality brings Nocturne, a third-person spookfest, to the Mac. In this gruesome game you do battle with the legions of the undead – werewolves, zombies, ghouls, and vampires. The graphics are gruesome – and, well, graphic – but if you're looking for a truly frightfully entertaining Mac gaming experience, Nocturne should be a scream.



Halo



Nocturne



Why it's cool: More brilliant Starcraft action; expanded units.

Who it's for: Starcraft devotees, real-time-strategy enthusiasts.

Publisher: Blizzard; www.blizzard.com

Distributor: Softline (01372 726 333)

Price: £17

Toner flair is no labour

Choose the right A4 business-printer solution. **By David Fanning**

People take more notice of colour documents, because colour sells. It is a proven fact that people react better to colour adverts and colour mailings. So why hasn't everyone opted for colour? Of course, it comes down to cost, followed closely by speed – at least, until now.

In this month's tests we bring together comparable A4 business colour printers and their mono counterparts. The price differential between colour and mono is becoming negligible, with some colour models available for just above the £1,000 mark. Although this may suggest that mono lasers are on the way out, there are plenty of situations for which they are still the right solution.

The products we looked at are aimed at small-to-medium-sized businesses. To be a viable business model, a Mac printer must have 10BaseT ethernet as standard. A number of printer manufacturers only recently began supplying network cards as standard, but the models in this feature all have 10BaseT. And any Mac office printer must also have PostScript compatibility, either using Adobe PostScript or emulating it. Some models tested use emulated PostScript 2, but most use real PostScript 3.

Ink-jet set

The most affordable printers are ink-jets, which are often less than £200. However, the drawback is ink-jets are slower than lasers, quality can be sketchy and networking costs can be high relative to the cost of the printer. Colour ink-jet output on good quality paper can be comparable with high-quality proofing devices, but they are not as accurate with colour. Also, PostScript is rarely available for ink-jets, and, when it is, the solution is software-based, so slowing down the process even more.

However, for low-volume, high-quality printing in a small office it would make sense for each person to have a colour ink-jet – even when you have factored in extras like PostScript software and special paper and ink.



If money is less of an issue, there are always A3 versions of most printers. Although more expensive, they are usually faster and often have more graphics-oriented features. Though A3 printing can be useful in the office, in a graphics environment it can be essential. The ability to print a full-bleed A4 page is a popular feature. Some A3 models aimed at the graphics market can even print A3 at full-bleed, with crop marks.

Some A3 printers can speed up printing significantly, by running out two A4 pages in a single pass.

Most mono printers tend to be laser, after mono ink-jets fell by the wayside. The market was so competitive that ink-jet mono printers disappeared almost overnight. Of course, ink-jets can print mono pages, but the quality never reached that of a laser printer.

A3 mono laser printers fall into two camps: business and graphics. The business models concentrate on speed while the graphics models are honed to print high-

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Editors' Choice

Tektronix Phaser 740

Macworld Rating ★★★★★/8.7

The balance of features with the Tektronix 740 means there is a configuration for every user. The fact that you can buy a mono laser and then, once the accounts department has forgotten about it, upgrade it to colour is a stroke of genius. For the more graphics-oriented, the Phaser 840 solid-ink version may be more suitable.

A4 business printers: colour and mono acid test

COMPANY	MODEL	STAR RATING	PRICE	RESOLUTION (DPI)	SPEED (pages per minute)		DUPLEX	SCANNING	EXTRA OUTPUT TRAYS	COLLATION	CONTACT
					colour	mono					
MONO											
Lexmark	Optra T 612n	★★★★/8.6	£1,249	1,200	N/A	19.4	Optional	Optional	Optional	Optional	01628 481 500
Xerox	DocuPrint N17	★★★★/8.4	£899	1,200	N/A	13.6	Yes	No	Optional	No	0800 454 197
COLOUR											
HP	LaserJet 4500DN	★★★★/7.9	£2,748	600	4.0	15.3	Yes	No	No	No	0990 474 747
Lexmark	Optra SC 1275n	★★★★/8.2	£2,059	600	3.1	12.3	No	Optional	No	Optional	01628 481 500
Tektronix	Phaser 840	★★★★/8.7	£2,406	1,200	9.5	9.5	Optional	Yes	No	Yes	0870 2413245
Tektronix	Phaser 740	★★★★/8.6	£1,805	1,200	5.3	16.1	Optional	Yes	Optional	Yes	0870 241 3245
QMS	Magicolor2+	★★★★/8.4	£1,795	2,400	4.0	15.5	Optional	Yes	No	Yes	01784 442 255
Xerox	DocuPrint NC60	★★★★/6.7	£2,349	600	2.1	2.2	No	No	No	No	0800 454 197



Higher purchase
Although the most expensive printer tested, the Hewlett-Packard LaserJet 4500DN can crank-out four colour pages per minute, and has duplex capability.

resolution images on large media. Some models can even print directly to polyester plates. These can be used in short-run mono and colour printing. However, the quality for colour printing is poor and only recommended for simple graphics, rather than pure photographic images.

The mono A4 lasers we tested were basic models, but it's easy to add functionality. All models can take extra paper trays, boosting paper capacity from 500 up to 2,000. User intervention can be

cut further by designating one tray for letterheaded paper and another for labels, for example.

Output trays are another useful addition, especially when there's more than one group of people printing from the same printer. Some models, such as Lexmark's, Optra allow you to designate different trays to different departments. And only the Lexmark models allow for a fax functionality to be added.

Taking the same idea further, more specialized mono lasers offer optional collating, sorting and even stapling options. Additional fax and scanning facilities can turn them into the ultimate imaging solution – but with a price tag to match.

Counting the cost

Cost of ownership is one of the main fears of people who would like to make the jump to colour. A colour job from a copy shop will cost around £1 a page. The quid-a-page charge is one that seems to have stuck in people's minds – but it's nowhere near this. Measuring cost-per-page is an inexact science at best. Ink/toner-useage varies

enormously with each job, because ink-coverage is a variable.

Colour printers are often used for presentation graphics, and these often weight in at 95 per cent coverage. Other jobs, though, will use far less. On top of this, the amount of ink used for similar jobs also varies from machine to machine.

One common office use of colour printers is producing letters and compliments slips with company logos. This may mean you use certain colours faster than others. This will add to the expense, but it's still cheaper than paying for fixed-run out-of-house printing. This is especially true when it comes to factors that are out of our control – such as the latest in the recent series of STD code changes. I wonder how many reams of letterheaded paper was ditched after the London dialling code moved to 0171 – only to be replaced next April by another change.

Tektronix was at the forefront of encouraging people to make the colour-leap. In a revolutionary move, it decided to not charge for the black ink used in its solid-ink colour models – to salve the worries of those concerned about buying two printers – a mono model for text jobs and a colour model for graphics jobs.

Laser foundation

Business printers mostly use laser technology – which is mature, so improvements are infrequent and rarely substantial.

The first test we ran was printing stationary in black-&-white. All printers excelled on black-&-white quality, regardless of technology. Where the colour printers fell behind their mono counterparts was on speed and networking capability.

Before laser printers, there really wasn't any satisfactory way of printing from the Mac. Dot matrix and, later, thermal transfer, were the order of the day – before even ink-jets got a foothold on the market. But now laser technology is being given a run for its money by two relatively new technologies. Tektronix (soon to become a part of Xerox)

has had its own solid-ink technology for a few years, which, in certain situations, can outperform laser printers. The other technology is LED (light emitting diode). LED printers are almost identical to laser printers, and – unless you are fond of dismantling printers – you may never realize you're using LED to print.

In the colour market, high-end proofing devices have traditionally used dye-sublimation to produce high-quality prints. Unfortunately, the cost is prohibitive. Such printers are fast disappearing, and being replaced by specialist ink-jet printers, such as the Epson Proofer.

Following Xerox's purchase of Tektronix, Xerox could – in theory at least – produce OEM printer-engines using the solid-ink technology. This would make the technology available to a much wider audience, and spread the word about solid-ink – something Tektronix has been attempting to do for years.

With mono lasers, text quality is acceptable at 600dpi, although many of the printers tested are capable of 1,200dpi. Though this is twice the resolution, it doesn't mean double the quality. Higher resolutions make a big difference only when printing half-tone images or graduated tones. The more dots you have to play with, the less banding will occur.

Question of quality

Colour quality is more difficult to quantify. Some printers with relatively low resolution are capable of good-looking results, because of the technology employed. For example, dye-sublimation printers tend to use just 300dpi, yet the images produced are of photographic quality. This is because with colour, it's sometimes better to have inks that bleed into each other, unlike with mono lasers, where higher resolutions produce sharp edges. A degree of dot-mixing occurs in colour laser prints, but not much; the quality is mostly a result of higher resolution.

Colour-matching and calibration are the important considerations with professional-level colour printing. In the business-printers market, it's less mission-critical, but even PowerPoint presentations should render company logos in the correct corporate colours.

And what about speed? To measure this accurately, it's important to separate the speed of the printer from the speed of the Mac or the speed of the network. There are a couple of tricks to secure such results. To find the engine speed, you must eliminate the time taken for processing. This is done by printing 11 pages, but starting the stopwatch after the first page drops. This produces an accurate engine speed.

The time a printer takes rasterizing a PostScript file and warming-up its engine is also relevant. To eliminate processing time, stop the print queue. This gives the computer time to collate the print

information. Then start the stopwatch – at the same time as starting the print queue. This doesn't eliminate the variation of network traffic entirely, but, unless you have an extremely busy network, it shouldn't make much difference.

Colour printers have to lay down four colours, which most of them do by printing each in a different pass. Others – such as the A3 Lexmark range – print the colours in a single pass. This technology hasn't filtered down to A4 models yet, but

when it does it will improve their speed. However, there is one benefit to multi-pass printing systems: faster mono printing.

Because mono requires only a single pass, a printer capable of four colour pages per minute can squeeze out 12 mono pages in the same time. Single-pass colour printers are no faster, even when printing mono images.

All the models under the A4 business-printer banner use laser or LED technology, with the exception of the Tektronix Phaser 840. The Tektronix solid-ink technology is, for the moment at least, unique to Tektronix. The qualitative differences between solid-ink and laser prints are not as pronounced as they were three or four years ago. Early colour lasers tended to experience problems with trapping that caused shadowing on lines on colour backgrounds. This problem has since been resolved.

From a maintenance perspective, it's cleaner working with solid-ink rather than toner. Solid-ink printers use wax blocks – a little like giant crayons – that are melted before being transferred to the page. There's a tray to collect excess wax, but that's about it for parts. Compared to colour lasers – particularly carousel-loading toner cartridges – solid-ink is simplicity personified.

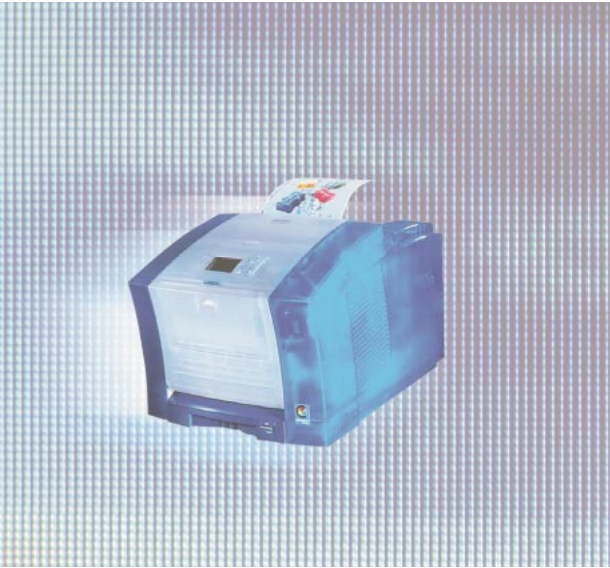
Mono-laser is the most mature technology that underwent our tests. Resolution is optimum and speed is fast enough for most uses, and so it's the add-ons that make the difference. Whatever you need, there'll be a solution – from faxing

continues page 80



Colour colour colour colour colour chameleon
The QMS Magicolor 2 offers better colour control than most of the printers in our tests.

Solid rarity
The Tektronix Phaser 840's solid-ink technology is unique among A4 business-printers.





Milk trays

Paper trays, output trays, and a duplex unit can be added to the Optra SC 1275n, making for a flexible printer.

to scanning and collating to sorting, most manufacturers have a wide range of add-ons. There are so many configurations, we were only able to test the most basic. However, a couple of manufacturers appear to have especially flexible options.

Lexmark's Optra starts with a small and innocuous printer but, with additional paper trays, duplex units and output trays, can evolve into a monster. Its attractive styling is spoilt by these additions, but it does make for a

flexible printer.

Xerox supplied both a mono (DocuPrint N17) and a colour (DocuPrint NC60) printer. The mono was predictable, and did the job well, but the colour was a different story. The engine was a relic of the bad old days of colour-laser printing – seemingly dozens of consumables, such as fusers, toners and fuser oil. Modern colour lasers – like those from QMS and Tektronix – have shrunken the need for abundant user-replaceable parts, but the DocuPrint NC60 demands technical know-how just to replace the photocopier-like toner cartridge.

This aside, the DocuPrint N17 is a fine printer, and, at £899, it's pretty good value.

Although mono laser printing is a mature technology, it is only as glitch-free as the manufacturers permit it to be. Macworld's criteria for inclusion in this group test was that the machines are Mac-compatible and come with ethernet as standard.

The reason we requested ethernet as standard is because printers should be simple enough for anybody to install, not just experts. But to our horror, many of the models sent to us came with ethernet cards in a separate box.

Then, piling agony upon frustration – the printers still refused to work, even after ethernet was installed. Drivers were installed and manuals scoured, but to no

avail. Piling irritation upon agony and frustration, we discovered that some models had no Mac or ethernet support, and others provided Mac drivers only on floppy disk. We opted to not embarrass the guilty manufacturers, in the hope that they'll not waste our time – and yours – and provide truly Mac-compatible printers next time. Let this be a lesson to you: make sure the printer you buy doesn't arrive in kit form, and always double-check that it really is Mac compatible.

With printers, the key decision is choosing whether to go with colour or mono. Colour can be luxurious, but is more expensive to run and buy. Mono is simple and reliable – yet for many jobs it no longer cuts the mustard.

Interestingly, Tektronix has built a bridge between mono and colour technologies – in the shape of a £400 colour upgrade for its £1,000 mono Phaser 740L. But if mono is all you need, it has never been cheaper. Mono laser printers with ethernet, PostScript and page-per-minute speeds of more than ten, come in at well under the £1,000 mark.

If you need quick, crisp text – and not much else – you can't go wrong with any of the lasers tested here. Text is universally sharp on all the printers we looked at, whether at 600dpi or 1,200dpi. If you want to use a mono printer for graphics, look at an A3 model. If you want to print invoices and letters, choose by price or available add-on features.

Macworld's buying advice

Get the model that most closely matches both your needs now and has the best expansion options. Use price weighed against functionality as a guide rather than being led by brand names.

Consider a mono laser only if you are sure that you'll never need colour.

Colour printers can be great, but they cost more to run and can be complex to administer. On the bright side, they make for more powerful presentations and give you a better view of graphics. Look for low-maintenance and easy-to-operate printers, like the solid-ink. Tektronix 840. And if the printers tested are too pricey for your department, don't forget alternatives such as ink-jet.

MW

Printing pace

Best results in test. Shorter bars and shorter times are better. Speed measured in seconds.

A4 business printers compared:



XPress

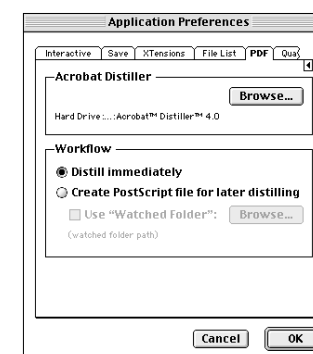
trainer

Across the tracks with the 4.1 updater to QuarkXPress



Layout distillery

Getting started with the PDF Export Filter: Let QuarkXPress know where Acrobat Distiller is, and how you want to process your PDF files.



PDF: workflow wonder

PDF has increasingly become a necessity for a variety of workflows, whether it be transmission over the Web, or simply sharing documents with clients or co-workers across workgroups. QuarkXPress 4.1 bolsters its Internet support with a new PDF Filter that provides an easy way to export documents. Keep in mind that QuarkXPress can't write PDFs by itself, and that you'll need to have access to Adobe Acrobat Distiller if you want to export PDFs. The QuarkXPress PDF Filter works with Distiller 3.0, as well as the new Distiller 4.0, so you won't necessarily have to upgrade to the latest from Adobe. Also, keep in mind that PDF isn't only for the Web; QuarkXPress 4.1 includes useful new print-only features that you can utilize when exporting a PDF.

A brief overview of the PDF preferences Most of the control you'll have over PDFs resides in the preferences, so once you've launched QuarkXPress 4.1 you'll want to set up your preferences right away. Choose Edit > Preferences > Application > PDF to start with the most basic options.

You need to tell XPress where your copy of Distiller is – unless you want XPress to save out PostScript files that you can distil later (see Layout distillery, top right). We prefer to distil our files immediately, but some workflows employ Distiller's "Watched Folder" feature. In a nutshell, you can tell Distiller to check a designated folder for new files that can be distilled at a specific time. Keep in mind that XPress can't control this on its own – you need to set your Distiller preferences to "watch" the appropriate folder.

Now choose Edit > Preferences > PDF Export to set up the bulk of the PDF options. The **PDF Export Preferences** dialogue box actually contains four tabs. We'll go through them sequentially, and you'll find that this is where most of your control resides.

Experienced Distiller and Exchange users will already be familiar with much of what follows. The **Document Info** tab, for instance, mirrors the document information fields that Exchange lets you enter. The options are straightforward; the document information you enter here will be especially useful if you plan to use Acrobat Catalog to create searchable indexes of PDFs you distribute on CD-ROM or other media.

The **Hyperlinks** tab gives you the option of automatically creating Acrobat hyperlinks and bookmarks in your exported PDF. You'll need to use the QuarkXPress Lists or Index features to take advantage of this. If your document contains multiple lists, you also have the

option of specifying one in particular to use for bookmarks. For most of us not creating long documents, the Lists approach is more logical.

The **Job Options** tab provides some important choices, so be sure to think about these options carefully. If you want to defer to the preferences you've already set in Distiller, you won't need to use this tab at all (just don't check the initial checkbox). But XPress wisely allows you to override Distiller's preferences when creating your PDF. This feature lets you customize the preferences for each XPress document you need to distil, without having to switch to Distiller and change settings which might be working beautifully for other applications. We prefer to check **Override Distiller's Job Options**, so we can customize the settings for our XPress PDFs, which tend to contain more text than other PDFs we create.

The choices in this tab really relate to your viewers' ease of use. Embedding fonts and compressing graphics ensure that everyone will be able to view your PDFs in the way you intend them, without font substitution or graphics dropping out due to insufficient memory. Unless you have detailed graphics that might require magnification, you probably want to leave the resolution for compression of all types of images set to the default of 72dpi (Mac screen resolution). Fonts are another issue. It's quite likely that your viewers won't have the fonts you've used in your document – unless you only use Mac OS system fonts. Creating a PDF file is much like creating an EPS, which means your viewers stand a good chance of experiencing font substitution – you wouldn't send your QuarkXPress documents to the service bureau without the necessary fonts, so use the same wisdom

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With all the razzmatazz of Adobe's launch of InDesign, it's easy to forget about the power and versatility of QuarkXPress. Quark seems to have taken many of InDesign's new features to heart in its plans for XPress 5.0 (See Macworld, July 1999), which is due for release early 2000. In the meantime, the company has issued an interim update for XPress 4.0.x – and Macworld has an exclusive copy of the QuarkXPress 4.1 updater on our cover-mounted CD-ROM this month. So, update your copy of QuarkXPress 4.0 to 4.1 today, and follow our run-through of the upgrade's top new features.

PDF Expert Preferences 1

Enter basic document information and indicate if you want to automatically create hyperlinks or bookmarks in your PDF.

Document Info	Hyperlinks	Job Options	Output
Title:	Flier		
Subject:	Info on the upcoming concert		
Author:	John Smith		
Keywords:	Concert, Music, Theater		

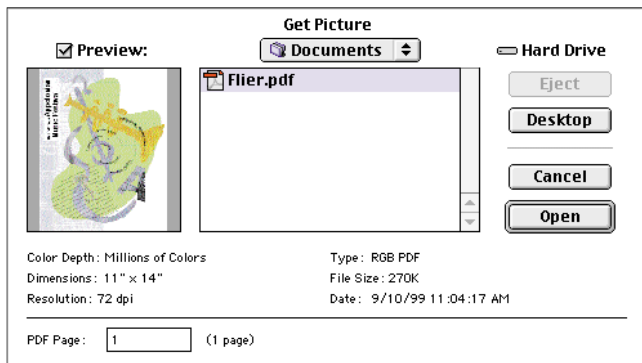
Document Info	Hyperlinks	Job Options	Output
<input checked="" type="checkbox"/> Lists become hyperlinks			
<input checked="" type="checkbox"/> Indexes become hyperlinks			
<input checked="" type="checkbox"/> Lists become bookmarks			
<input checked="" type="radio"/> Use All Lists			
<input type="radio"/> Use List: _____			

Document Info	Hyperlinks	Job Options	Output
<input checked="" type="checkbox"/> Override Distiller's Job Options			
<input checked="" type="checkbox"/> Embed all fonts			
<input checked="" type="checkbox"/> ASCII Format			
<input checked="" type="checkbox"/> Subset fonts below: 50%			
<input checked="" type="checkbox"/> Compress text and line art			
Color Images			
Compression:	Automatic ZIP/JPEG Medium		
Resolution:	Downsample to: 72 dpi		
Grayscale Images			
Compression:	Automatic ZIP/JPEG Medium		
Resolution:	Downsample to: 72 dpi		
Monochrome Images			
Compression:	CCITT Group 4		
Resolution:	Downsample to: 300 dpi		

PDF Expert Preferences 2

Configure your PDF to ensure it will view on-screen as you expect it too; or, customize settings if you expect it to be output to PostScript printers.

Document Info	Hyperlinks	Job Options	Output
Printer Description: Acrobat Distiller			
<input checked="" type="checkbox"/> Separations			
Plates: Process & Spot			
<input checked="" type="checkbox"/> Produce blank plates			
<input type="checkbox"/> Use OPI			
Images: Include Images			
Registration: Centered			
Offset: 6 pt			
Bleed: Asymmetric			
Top:	12 pt	Left:	6 pt
Bottom:	12 pt	Right:	6 pt



Page, er, maker

Import pages from a PDF just as you would any other graphic.

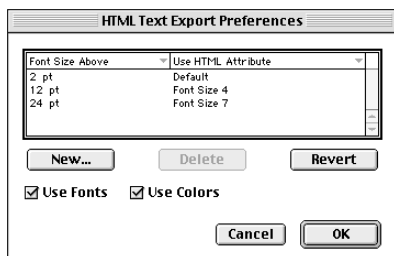
here. You might export an initial test PDF with **Embed all fonts** checked to see how it affects your file size. Acrobat utilizes an effective compression scheme, and you might find that the resultant file size is not prohibitive. If you happen to use a number of fonts, and do not want to embed all of them, then pay attention to the **Subset fonts below** field. This handy little feature allows you to embed only the portion of the font that is used in your document.

The **Output** tab is useful when you intend your PDF to be output to a PostScript printer. Here you can set preferences similar to those in the XPress **Print** dialogue box. A new feature you may notice is the choice to set asymmetric bleeds. Previously, XPress constrained us to a single bleed value for all edges of a page. No more. Now we can set a different bleed value for each edge. If you want to use this ability with printed output, rather than the PDF function, be sure to load the CustomBleeds XTension included with version 4.1.

Getting down to business: exporting your PDF Once you've progressed through this rather full set of preferences, there is actually little left to do. When you're ready to export, simply choose Utilities > Export as PDF. Just in case you need to re-confirm your preference settings, there's a handy button in the Export dialogue box that gives you a last chance to fine-tune your settings. If your preferences are set to **Distil immediately**, then as soon as you click **Save**, Acrobat Distiller will launch and create your PDF; if you selected **Create PostScript file for later distilling**, then XPress will save a PostScript file that is primed for distilling at your convenience.

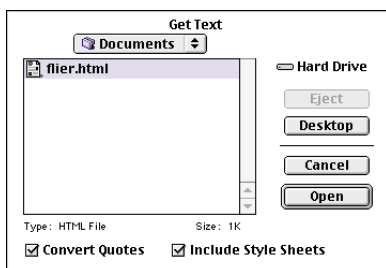
The other side: importing PDF files XPress 4.1 also allows you to import pages from a PDF file, just like you would any other graphic. The only limitation – for the time being – is that you'll only be able to import PDFs either created with Acrobat 3.0 or saved from Acrobat 4.0 as version 3.0-compatible.

Select your picture box and choose File > Get Picture. When you



Font wants

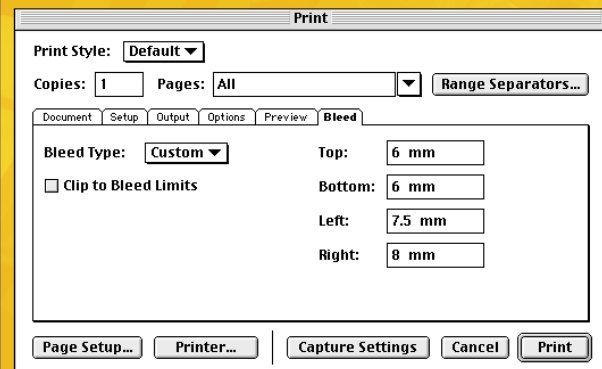
The HTML Export Preferences dialogue box.



It's just text, after all

Importing HTML takes place in the standard Get Text dialogue box.

XPress 4.1 bleedin' good



QuarkXPress 4.1 lets you specify different bleed amounts for each page edge if you have the CustomBleeds XTension loaded.

Another handy feature new to version 4.1 is the ability to set different bleed values for each page edge. Previously, QuarkXPress only allowed a uniform bleed setting for every page edge, but this placed a somewhat arbitrary limitation on the way we design. With CustomBleeds loaded, this limitation is gone, and you'll be able to address that one edge you really want an extra inch to play with.

click on the name of a **PDF file**, you'll notice an extra field – called PDF Page – becomes active at the bottom of the dialogue box. XPress lets you import any page from a multi-page PDF. The preview pane will even update to reflect the contents of the page you indicate. If you do use this field to choose a page number, you'll have to tab back to the file list to re-choose the file name you've selected.

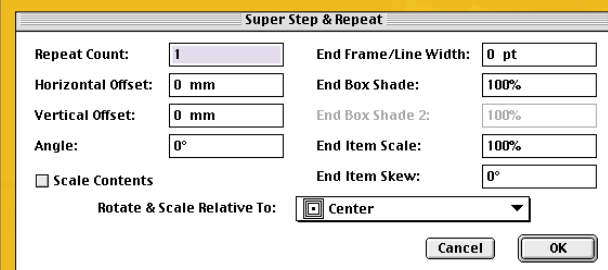
HTML Export: read the text

QuarkXPress 4.1 also includes XTensions software to help you export and import text in HTML format. The HTML Text Export and HTML Text Import features are rather basic, so don't expect to see your four-colour catalogues magically transformed for the Web. Take the names of the XTensions literally: they export and import text as HTML. You won't be seeing any of your graphics in the exported files, so don't be surprised.

As with PDF, much of the work for HTML export resides in the preferences, so let's start there (Edit > Preferences > HTML Text Export). The basic principle of the **Font Size Above** list is that all fonts will be broken down into ranges. Text that falls within a given range will be assigned the corresponding HTML attributes when exported

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5, 6, 7, 8: Super Steps



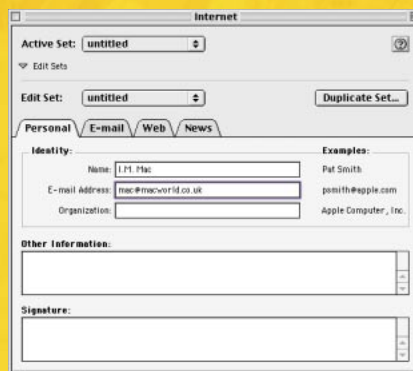
The Super Step and Repeat XTension offers a more powerful enhancement to the standard QuarkXPress Step and Repeat feature.

Super Step allows you to set a quantity and appropriate offset when duplicating items..

Getting started with QuarkLink

You just need to follow a few easy steps to get going with the new QuarkLink feature.

- 1 Before you launch QuarkXPress, make sure QuarkLink is in the XTension folder (it installs by default with the 4.1 updater).
- 2 Open either the Internet Control Panel (Mac OS 8.5 and later) or Internet Config freeware application (Mac OS pre-version 8.5) and enter your SMTP server and email address. Also enter any relevant proxy or port information if you connect to the Internet through proxy servers.
- 3 Launch QuarkXPress and click Yes in the Internet Access dialogue box.
- 4 Choose **Edit > Preferences > Application > QuarkLink**. Set the Download Frequency and check relevant Interest List items.



Enter your email address and SMTP server information in the Internet control panel.



- 5 Choose **Utilities > QuarkLink** to see what options are available, or choose **View >**

Show Headlines to display the Headlines palette if it isn't already displayed.

to HTML. XPress doesn't allow a font size smaller than 2 points, so that's where the preferences begin. Any text that is 2 through 11 points in size will be formatted with the Default font HTML attribute; text that is 12 through 23 points in size will be formatted with the Font Size 4 HTML attribute, and so on. You can change any of these default associations between font ranges and HTML attributes, or you can set new ranges by clicking **New**. If you check **Use Fonts and Use Colours**, then the HTML that QuarkXPress exports will specify the fonts and text colours you have used. Please note, however, that if the specified font is not available on a viewer's computer, the text will display in the default HTML font.

The HTML Export Preferences dialogue box Once you're satisfied with these font relationships, all you have to do is choose **File > Save Text**. You'll note that there's now an HTML option in the **Format** pop-up menu. After saving the text, view the exported file with your Web browser to see if it meets your expectations. Keep in mind that XPress supports only these text attributes when exporting in HTML format: Bold; Italic; Strike Thru; Superscript; Subscript; Text alignment (left, right, or centred); Text colour; and, Underscore

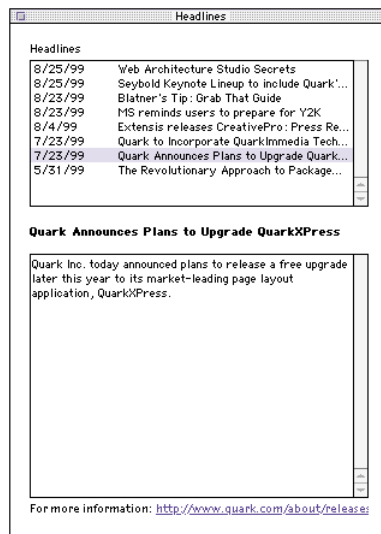
HTML Import: easy does it

Importing text from an HTML doc is straightforward, and happens in the standard **Get Text** dialogue box to which you are accustomed. You probably won't even notice any difference in this dialogue box, except that HTML files are available for import (files must be named with either .html or .htm file extension to display in the dialogue box). One caution: by default, you won't be able to import the ASCII text of an HTML file because XPress wants to preserve as much of the formatting as possible for you. When you actually want to import the source code for the HTML page rather than the formatted page itself, an easy workaround is to Control-Click on the file name. You'll notice the **Type** field changes from HTML file to ASCII/XPress Tags file.

QuarkLink: Internet access

Unless you're dozing at your desk, one of the first things you'll see in QuarkXPress 4.1 is a new dialogue box that displays upon launching the application. The other major feature in QuarkXPress that takes advantage of the World Wide Web is QuarkLink, and it asks you permission to have Internet access when you launch QuarkXPress.

This handy XTension lets XPress send and receive information over the Internet. It has two main elements. The first is the **Headlines** palette, which allows Quark and XTensions software developers to display news headlines in the palette, and provide live URLs for additional information – your default Web browser will be launched automatically when you click on a URL. Quark will be providing a large variety of content for the Headlines palette, including press

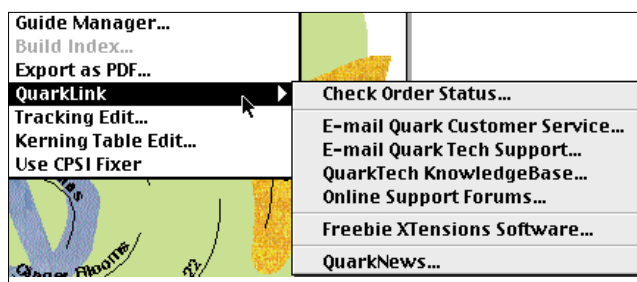


Read all about IT (left)

The Headlines palette, new to QuarkXPress courtesy of QuarkLink

Add options (below)

The QuarkLink submenu. The contents of the submenu can change dynamically when you connect to the Quark Web server, so periodically check your options.

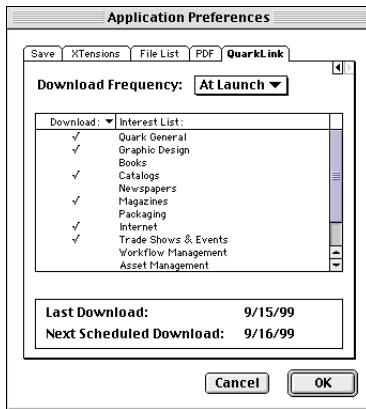


releases, product information, tips and tricks from major authors, and general information about the pre-press and software industries.

The other main element of the XTension is the **QuarkLink** submenu – found under the **Utilities** menu – the contents of which Quark can update dynamically to users when they connect to their Web server. This menu allows you to do things like send email from within XPress, open specific Web pages (like various technical support resources), and in future versions download software, such as XTension updates.

If you already connect to the Internet, getting started with QuarkLink is easy. In fact, you probably won't have to do any special

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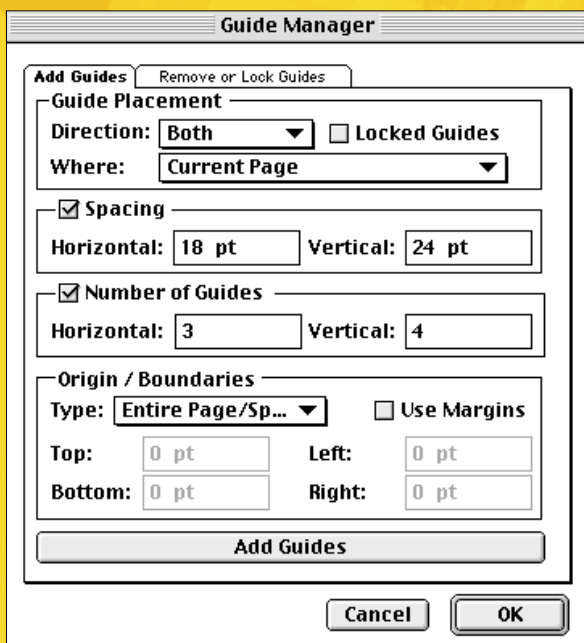
Link and swim
The QuarkLink tab in the Application Preferences dialogue box.

configuration. If you have a recent version of the Mac OS, you'll use the Internet control panel to do this; if you have a slightly older version – Mac OS 8.1 and earlier – you'll need the Internet Config freeware apps. Simply open one of these tools and enter your email address and your SMTP server – the server through which you send email. You might need help from your ISP, but the information is most likely already entered in your email program or your Web browser. Just check in the preferences of these other applications first if you don't know the information off the top of your head.

Pay a visit to the QuarkLink preferences (Edit > Preferences > Application > QuarkLink). This is where you determine what kinds of headlines will download to your palette. There is a fairly long list of options, which can grow dynamically when QuarkLink accesses the Quark Web server, so check out the options every now and then. Put a check mark next to each of the Interest List categories for which you'd like to download headlines. You can also determine how often headlines download. And you can always download Headlines simply by choosing View > Show Headlines.

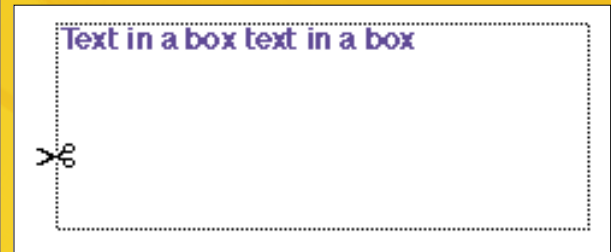
MMW

Guides promise to do their best



The GuideManager XTension gives you greater control over the placement of guides in QuarkXPress documents and spreads. It enables you to create, lock, or remove a guide grid. The grid is the real key here – you'll have control over the origin and recurrence of your guides, so that you can quickly set up an easy framework for layouts with a precise geometric format (no more running calculation to drag out guides every 8.37mm, for instance).

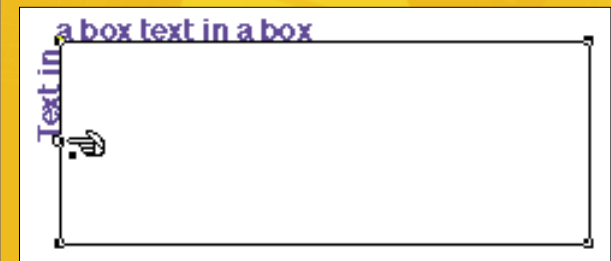
A cut above: 4.1's new Scissors tool



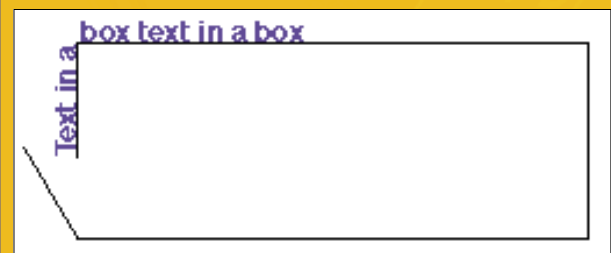
With the Scissors tool selected, the scissors icon displays when your cursor is placed over a box or line that is eligible to be "cut".

A handy addition to QuarkXPress 4.1 is the new Scissors tool. It's delivered as an XTension, like the other features mentioned in this section, so be sure to take a look inside the "Freebies" folder on the CD-ROM. When you launch QuarkXPress with this XTension loaded, you'll notice this new tool at the bottom of your tool palette. Similar to the scissors tools found in other popular desktop applications, the QuarkXPress scissors tool lets you "cut" boxes or lines. In essence, when you cut a text boxes or picture boxes, you're really converting them to text paths or lines.

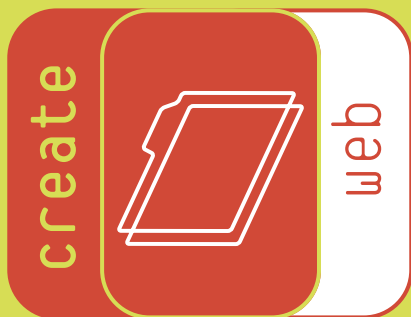
For example, when you cut a text box, you'll be turning it into a text path, and QuarkXPress will try to save any relevant formatting that it can. In the examples below, the text contained in the text box actually displays "outside" the box once you've cut it. Since it's converted to a text path, it displays just as any text path would.



After making your cut, a new Bézier point displays on the path. With the item or content tool selected, move the point to the desired location (the pointer icon changes to show that the point can be moved).



The finished product: text on a path, retaining the text attributes from the original text box.



Web-time television

How to create
a window on
the Web.

By Jim Heid

The Web cam was inspired by a coffeepot. Some caffeine-addled academics at Oxford were tired of climbing several flights of stairs, only to discover an empty urn; so they connected a video camera to a computer, and pointed the camera at their coffee-maker. The camera's image appeared on a Web page, enabling them to check on the java supply before hitting the stairwell.

The Web cam was born

Today, thousands of Web cams all over the world are providing Web surfers with live, or nearly live, views of – well, you name it – offices, roads, street scenes, building sites, scenic vistas, child-care centres, and things we can't talk about in this magazine.

The Oxford academics cobbled together their system with bailing wire and duct tape. Today, you can create a Web cam with off-the-shelf hardware and software. You don't even have to have a continuous Internet connection – even if you connect through an ISP and a cranky modem, you can have a Web cam of your own.

Here's a guide to assembling a Web cam. As an extra-credit project, I also describe how you can add real-time weather information to your cam page in a sidebar on Macworld Online (www.macworld.com/1999/12/create/). And, to prove that I practice what I preach, you can see my Web cam and weather page in action at www.heidsite.com/weather/.

The Web-cam recipe calls for equal amounts of hardware and software. On the hardware side, you need a video camera – to aim at your scene – and video-capture hardware – to bring the camera's images onto the Mac. Neither component need be expensive – you aren't seeking broadcast-quality video, after all.

If yours is a USB-equipped Mac, and you don't yet have a video camera, consider a Logitech QuickCam VC (Micro Anvika, 0171 636 2547) for £60, which connects to a USB port and requires no additional capture hardware. If you already have a video camera, all you need is a USB capture device, which transforms the



video into QuickTime format. Two such devices are Avid's Avid Cinema (01753 655 999, www.avidcinema.com) for Macintosh with USB, for £199, and XLR8's InterView (01923 266 400, www.xlr8.com), for around £99. But, don't buy an InterView until XLR8 updates its software drivers – the 1.01 drivers shipping at this writing are incompatible with Web-cam software.

Dirty-old Mac

An older AV Mac also makes a fine Web-cam engine. Set up an elderly Mac as a dedicated Web-cam machine, and you avoid bogging down the performance of your current Mac with extra duties. I drive my cam with a Quadra 840AV, the likes of which often sell for about £150. Although, I paid a bit more when I bought mine new in 1993.

Then there's Web-cam software,

continues page 92

Web-cam software lets you customize your images. Here's a collection of tips for using Rearden technology's software to do just that.

Create captions and logos (see top, right)

With SiteCam's captioning features, you can add the date, time, and other information to your cam images.

You can also add a logo to the image. Save your logo in PICT format, and then use the Logo dialogue box to control its position, and the way it blends with the cam image.

Caption Settings

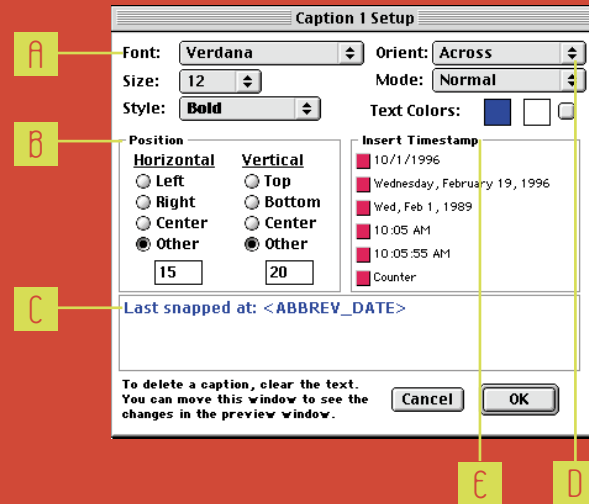
A Choose a font, size, style, and colour combination that makes the caption stand out against your image.

B Specify the caption's location. The values are in pixels, measured from the top-left corner of the image. Use SiteCam's Preview window to check your work.

C Type the caption text here.

D The Mode pop-up menu controls how the caption appears: superimposed on top of the image, blended with it, or displayed with a coloured background.

E To have SiteCam insert time and date values in a caption, click on the desired values.



Create a time-lapse movie

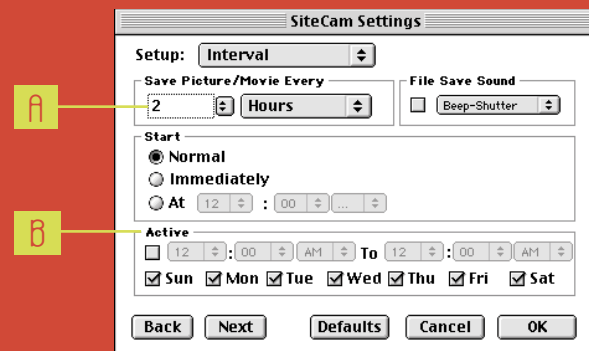
SiteCam can assemble periodic captures into a time-lapse QuickTime movie. In the Output Format dialogue box, choose QT Movie from the Media Format pop-up menu. In the Interval section of the SiteCam Settings dialogue box, specify the interval at which you want SiteCam to save the movie. For my cam page, I have SiteCam create a new movie every two hours.

Interval Settings

A Specify how often SiteCam should create a new movie, or grab a still image.

B Specify when the current document should be active. For outdoor scenes, you might configure this area so SiteCam doesn't snap images at night, when there's little to see.

Choose the Time-Lapse command from the Document menu, and configure the dialogue box as in the bottom-right figure.

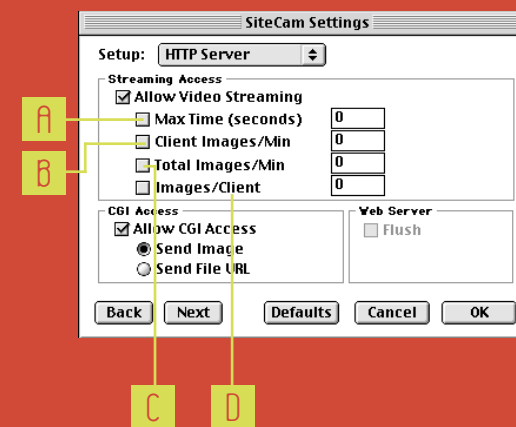


QuickTime settings (see top, left)

A Use the Time-lapse Settings dialogue box to specify how many frames are in the movie, and how often SiteCam should snap a new frame. These values are interrelated: change one, and the other changes as well. Both also relate to the duration value, specified in the Interval dialogue box. For example, for a movie saved every two hours, entering an Interframe Delay value of 120 – two minutes between each frame grab – yields a movie with 60 frames.

B The Apple Cinepak compressor yields small, smooth-playing movies, and is compatible with all QuickTime versions. But each frame takes a second or so to compress, and this delay will probably be unacceptable if you're running SiteCam on the same machine that you work on. For faster compression, use the Photo-JPEG compressor.

Avoid creating a slow-downloading movie: specify a small image size, such as 160-x-120, in the Output Format dialogue box.



Throttle a live feed.

When delivering a streaming feed, you may want to conserve bandwidth, or control how long a user can stay connected. Choose HTTP Server Settings from the Document menu and make the desired tweaks.

Server settings (see bottom, left)

A To put a time limit on each visitor's live feed, check this box and enter a value. When the specified amount of time has elapsed, the live stream ends. This option prevents a visitor from wasting bandwidth.

B To control how many images a visitor receives each minute, check this box and enter a value. This can be a good way to prevent visitors with fast connections from using too much of your bandwidth.

C To control how many images all visitors to your page receive, check this box and enter a value.

D To restrict the number of images a visitor sees, check this box and enter a value. When your site has sent that number of images, the visitor has to reload the page.

that does everything from snap images at regular intervals, to create time-lapse movies that squeeze a day into a minute. Two downloadable Web-cam packages are available for the Mac OS: Rearden Technology's (www.rearden.com) SiteCam, for about \$150, and Poubelle Software's (www.poubelle.com/Oculus) Oculus, for \$20 (shareware). SiteCam is my favourite – it isn't always as easy to use as Oculus, but it's unique in providing a built-in Web server, that can dish out live cam views. I concentrate on SiteCam here, although many of the concepts I discuss apply to both programs.

Two paths to a cam

SiteCam provides several ways to set up a cam, and the path you take depends, in part, on the type of Internet connection you have. If you have a continuous Internet connection and a dedicated IP address, you can deliver a streaming-video view – rather than a static shot. With streaming, visitors

see a live, albeit jerky, view of your camera's subject – ideal for constantly changing scenes, such as busy roads or building sites.

Do you have a continuous connection, but your scene doesn't change all that often? Set up SiteCam to grab just one image at the moment a visitor views the cam's page (see "SiteCam secrets"). The visitor still sees an up-to-the-minute view, but you don't waste bandwidth by transmitting a live-stream of a static scene.

Home and away

Most big businesses and institutions have the kind of continuous connection I just described, but most homes don't. Modem connections, and even most cable modems and DSL phone lines, don't provide dedicated IP addresses. For a home-based cam, configure SiteCam to snap an image at regular intervals, and then use SiteCam's FTP features to send that image to your Web server.

One disadvantage to the FTP approach, is that it makes your cam image vulnerable to hijacking: some unscrupulous leech, eager to exploit your efforts, will include your cam image in his or her Web page.

SiteCam has great anti-hijacking features, but to use them you must be running your own Web server – either SiteCam's built-in server, or a WebStar-compatible server. If you're transferring images to an Internet provider using SiteCam's FTP mode, you can't use SiteCam's anti-hijacking features.

But, take heart – you still have a weapon against hijackers. Simply change the name of your image file every week or two – also, don't forget to update the relevant link in your cam's HTML page. Delete the older image file from your site, or better yet, replace it with another image – perhaps of some text encouraging viewers to go to your cam page.

This technique makes your cam image a moving target, requiring hijackers to

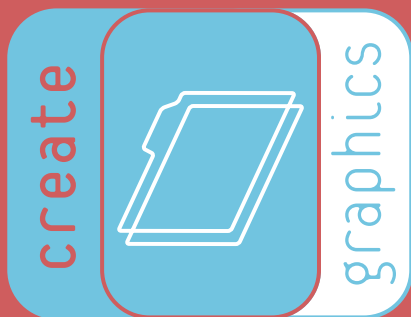
check your page often and update their pages accordingly. It doesn't prevent hijacking, but it definitely complicates your attackers' lives.

Web cam

Sure, Web cams have practical applications: monitoring traffic or weather, checking on the kids at day care. But, most of all, they're fun. Gazing at a live view of your home town, of a favourite vacation spot, of a place you've heard of but will never visit, of some stranger's cluttered cubicle – virtual journeys like these speak to the globe-shrinking-immediacy of the Web, a medium that enables us to share a bit of ourselves, including the views from our windows.

MW

A contributor to Macworld since 1984, Jim Heid (www.heidsite.com) has been operating a Web cam since 1996; he's been drinking coffee for far longer.



Delivering PostScript

Understanding PostScript – DTP's vital ingredient.

By David Blatner

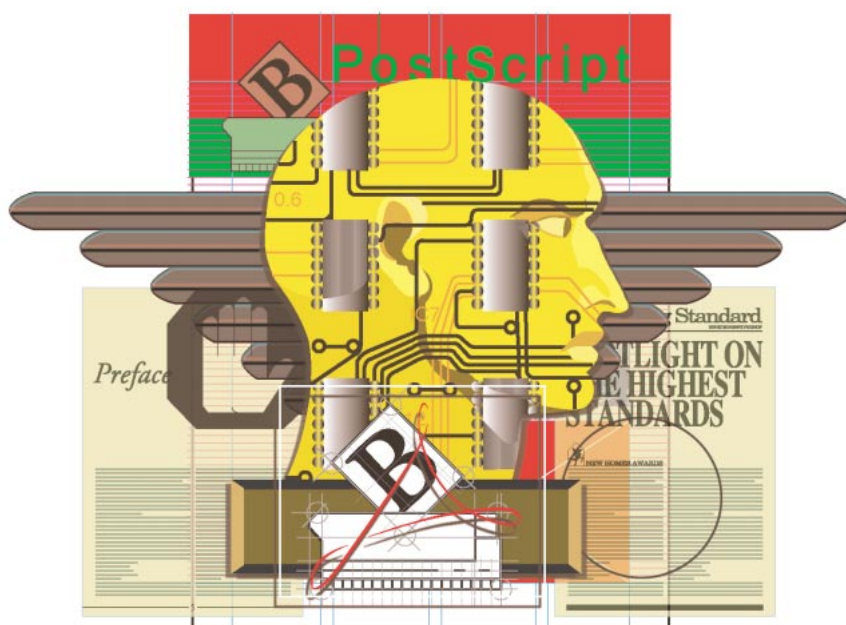
Lots of people fly in airplanes, but few understand how aviation works. That's why many of us cling to erroneous ideas about flying, believing that air turbulence is dangerous, say, and can even cause an airplane to fall out of the sky. For these unfortunate travellers, ignorance is not bliss; it's the cause of unnecessary anxiety.

PostScript is what makes desktop publishing fly – it's the underlying structure on which many magazines, books, and newspapers are built. Sure, you can use QuarkXPress or Adobe InDesign without knowing anything about PostScript, just as you can fly without understanding the physics of lift. But, knowing even a little about PostScript can go a long way: it can help you predict what's going to come out of your printer, saving you time and frustration. It can also help you troubleshoot problems. And, with a smattering of PostScript, you can do a few tricks you may not have thought possible (see "Zap the big white box").

Talking in code

PostScript is a programming language that describes text and graphics on a page. Its commands control where a laser printer – or any PostScript device – places a line of text, a circle, a bézier curve, or a bitmapped image. Although you can easily write your own code (see "PostScript unveiled"), few people actually write PostScript anymore; instead, programs such as Macromedia FreeHand, QuarkXPress, and Apple's LaserWriter driver write PostScript commands to a disk file, and then send the file to the printer. The printer's interpreter reads the PostScript commands and converts them to marks on the page.

Adobe Systems originally wrote PostScript and also licenses it, but many other companies have built interpreters that can read PostScript. Adobe has released three different versions over the years: PostScript, PostScript Level 2, and PostScript 3. While most imaging devices today can handle Level 2 commands, only



newer printers can deal with PostScript 3 commands – including the ability to process native Adobe Acrobat PDF files and perform in-printer trapping. Ultimately, for the sake of compatibility with older devices, few programs and drivers take advantage of the higher-level commands available in Level 2 and PostScript 3.

Page-building basics

Knowing how PostScript builds pages is helpful in understanding how desktop publishing applications work – and why your output may not always look the way you expect it to. PostScript describes a page one object at a time – a circle, some text, or whatever, with each object sitting on top of the previous objects. In QuarkXPress, you might create a text box that has a solid white background, and the word *Macworld* in it. When you print, QuarkXPress and the LaserWriter driver together convert this image into PostScript: the PostScript

continues page 96

PostScript looks difficult, but it's actually simple. Because it's almost always plain text, you can use any text editor to write or edit it – don't use a word processor, such as Microsoft Word; it might add formatting. I often use Bare Bones Software's BBEdit (www.barebones.com) because it lets you download PostScript to the printer quickly.

Here's a sample PostScript program that draws a series of boxes (you can type this code in or download it from www.macworld.com/1999/12/create/). Open any EPS file and you'll see something similar: an EPS file starts with all the procedures it's going to use, and ends with the actual commands to make marks on a page. EPS files don't include the showpage command, though.

When you've finished writing your program, save it as a text file, and download it to your printer. If you use BBEdit, you can choose Send PostScript from the Tools menu. Or, you can use another utility, such as Adobe Font Downloader, to send the file.

1 Lines that begin with a per cent sign are comments, and the interpreter ignores them. The one exception is this first line, which some interpreters require to inform them that the following file is PostScript.

2 A slash at the beginning of a line, identifies a procedure that we'll use multiple times later in the program. Procedures are always defined inside curly brackets, and end with def. We've called this procedure drawbox, but you can call procedures almost anything you want.

3 The program does all drawing on a giant grid, and there are generally 72 points per inch. Here, we set PostScript's virtual drawing tool to the (0, 0) co-ordinate; the program then draws a line 100 points to the right and 0 points vertically. Note that in PostScript, the values (in this case, co-ordinates) always come before the command. This is called putting

values on the "stack."

4 The closepath command makes the open-ended line into a closed box. The box doesn't actually appear until you stroke, or fill it. In this case, stroke instructs the printer to paint the line with the default 1-point rule, but, not to fill the box.

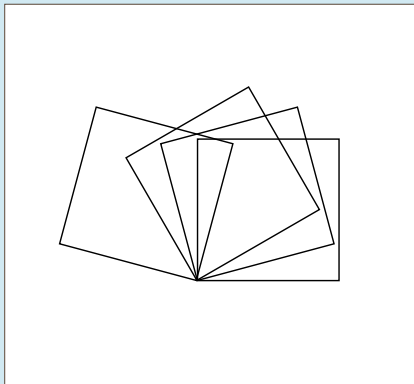
5 The (0, 0) co-ordinate is usually at the lower-left corner of the page. The translate command tells the printer to move (0, 0) to a different co-ordinate – in this case, 250 points from the left edge of the paper, and 350 points up from the bottom of the page. We've already specified a procedure, so we can call it by name anytime.

6 Here, the whole co-ordinate grid system rotates 15 degrees, and the program draws the box again. This way, you don't have to

figure out new co-ordinates for the box's corners. In this case, each time you give the rotate command, the grid rotates further. The second time you give the rotate command, the grid rotates a total of 30 degrees, and so on.

7 The showpage command tells the imaging device to print the page. If you don't include the command, then the program draws the virtual page but no paper comes out of your device.

```
1 %!PS-Adobe-3.0
2 /drawbox {
3   0 0 moveto
4   100 0 lineto
5   100 100 lineto
6   0 100 lineto
7   closepath stroke} def
8 250 350 translate
9 drawbox
10 15 rotate
11 drawbox
12 15 rotate
13 drawbox
14 45 rotate
15 drawbox
16 showpage
```



file describes the rectangle, fills it with white, and then places the text on top of it. If the text contains any type effects, such as kerning, PostScript may place the text one character at a time.

Complete tosh

There's a common myth that it takes longer to print a QuarkXPress page if your text boxes have a background of None. As this example shows, that's balderdash. If the text box were transparent, rather than white, the only difference would be that the PostScript commands would not paint the box white before placing the text. Therefore, it's actually faster to print transparent text boxes, so it's faster after all.

PostScript is an opaque imaging model, which means that whatever you place on the page will totally cover what's beneath it. If you use PostScript to describe a 50 per cent grey box on your page, and then put a 20 per cent grey box on top

of it, you don't get a 70 per cent grey box. Instead, you see only the 20 per cent grey box. Whatever is on top takes precedence.

The fact that PostScript describes opaque objects, also explains why there's no such thing as a truly transparent object in PostScript – although I hope Adobe will address this limitation. If you place a soft drop-shadow on top of something else in QuarkXPress, you can't see through the shadow because, again, whatever is on top entirely covers what's underneath. Any program that offers a transparency feature has to fake this effect when it prints a page.

PostScript Error hell

A common incentive to learn PostScript, is the alarming "PostScript Error" message that stops a print job dead in its tracks. PostScript is a sensitive language; even a small error can wreak havoc on your page. For instance, a command called "lineto" draws a line from one

Here's a real-world example of how editing PostScripts can simplify your life. QuarkXPress 4.x creates EPS files slightly differently from how previous versions did: it always draws a white box behind your page. If you are compositing your EPS file on top of some other image, and want the background transparent, you're out of luck – unless you can edit PostScript.

1 Open the EPS file in a text editor, such as BBEdit – word processors like Microsoft Word can mess up the text by adding formatting.

2 Search for the line that reads %%EndSetup. Soon after it, you'll see another line that reads something like g np clippath 1 H V G calcbnd.

3 The commands g, np, H, and so on, are all procedures defined earlier in the file. Remove the characters 1 H V and save the file again. Those three characters create that white box – the 1 is the colour white; if you were to change this to 0, the box would be black.

That's it – if you place the EPS file in another program, such as Photoshop, the preview won't be transparent, but the actual artwork will be.



Before...

When you open or place a QuarkXPress 4.x EPS file in Photoshop – or any other program – it appears with a large white box behind it.

... and after

By editing the PostScript codes in the EPS file, you can remove the white box to create a transparent graphic.



page co-ordinate to another. If your computer makes an error when writing the PostScript code, it might write this command as "lneto". Because the interpreter won't know what this command means, it will respond with the "Undefined Command" error. Another common error, especially on older printers, is "Limitcheck", which occurs when some internal limit has been exceeded. For instance, old devices can't handle long, complex bézier curves, and may return a "Limitcheck" error if you don't simplify the shape.

To find out exactly what the error is when using QuarkXPress or Adobe InDesign or PageMaker, turn on the error-handling feature in the Print dialogue box. In other programs, you can choose Error Handling from the General pop-up menu in the Print dialogue box – if you don't see this pop-up menu, you're using an older LaserWriter driver. Either way, you'll get a page that lists the offending command and the type of error. If it's an "Undefined Command"

error, something's wrong with the print stream, and your best bet is to send the job again. If you see "Limitcheck," you should try to simplify the file's contents.

The future of PostScript

Although PostScript has long been at the core of desktop publishing, the industry is moving toward using Acrobat PDF as the standard imaging language. But, there's life in the old language yet: because Adobe originally based the PDF specification on PostScript, knowledge of PostScript is very useful in understanding how Acrobat works, too. And, it'll be years before PDF fully replaces PostScript. Until the majority of imaging devices can read native PDF files, these documents will still require translation – usually by a printer driver – into PostScript. MW

David Blanter is a co-author of Real World Photoshop 5 (Peachpit Press, 1998).

More about PostScript

Web sites

Adobe's PostScript Page
www.adobe.com/prodindex/postscript/

The PostScript FAQ

www.postscript.org/FAQs/language/FAQ.html

Books

PostScript Language Reference Manual
by Adobe Systems (Addison-Wesley, 1998; also available free in PDF format from the Adobe Web site).

Learning PostScript: A Visual Approach
by Ross Smith (Peachpit Press, 1990).



Trim your extensions

Conflict Catcher does more than its name suggests.

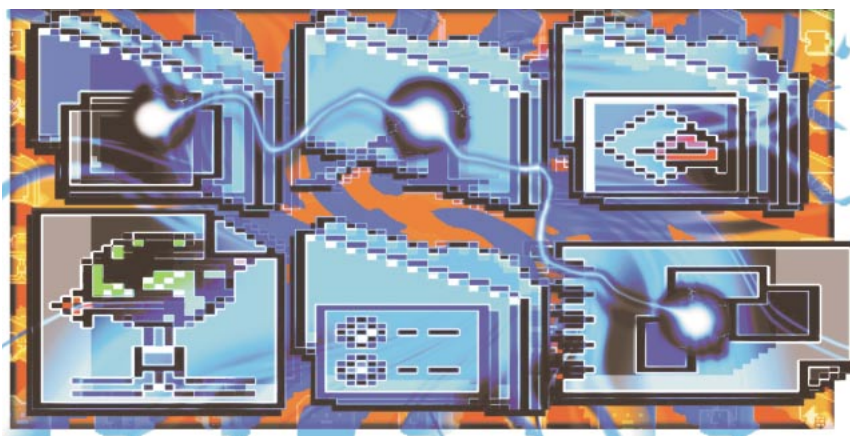
By Ted Landau

With the hundreds of files that fill a typical System Folder, just keeping track of what's in there can be a daunting task. That's one good reason to use Casady & Greene's Conflict Catcher 8 (£81; Softline, 01372 726 333, www.casadyg.com). Conflict Catcher is similar to the Extensions Manager that ships with the Mac OS – in the same way a luxury liner resembles a rowboat. Both utilities generate a list of your extensions and control panels, and both allow you to enable or disable specific ones selectively – either individually, or by creating customized sets. But, while Extensions Manager starts to run out of gas at this point, Conflict Catcher 8 is just getting started.

Conflict Catcher's name identifies the program's most significant added feature: it automates and simplifies the process of "catching" an extension conflict (see "Catch conflicts more quickly"). But, even if conflicts aren't giving you trouble at the moment, Conflict Catcher has a host of other helpful tricks up its sleeve.

Locate files quickly

Looking to disable an extension from the list in Conflict Catcher's main window? If you're like most users, you'll use your mouse to scroll through the seemingly endless list until you ferret out the file, and then click on its name – or its check



box – to disable it. There's a faster way: just start typing the name of the desired file, and Conflict Catcher will take you right to it. Then, type \mathbb{R} -return to toggle the enabled or disabled state of the extension.

Find the most informative view

You can get easy access to Conflict Catcher's most useful features through the Listed By column. The header of this column is a pop-up menu, and its various options sort the start-up file names in a dozen different ways, giving you clues about a variety of ills that can affect your Mac (see "Choose your criterion").

Say you suspect the order in which your

extensions load at start-up is causing a problem. Choose Listed By Load Order. From this view, you can drag any file from its initial location to any other spot in the list. To do so, click on the file's name and hold down the mouse button while you drag. This is especially useful for resolving problems that occur when an extension conflicts with one that loads later in the sequence.

Maybe you suspect that a new extension is the cause of some new symptom. You can easily find out what files are new additions to your System Folder by selecting Listed By Date Installed.

Need some extra free RAM? If you

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Catch conflicts more quickly

Eventually it happens to every Macintosh user. Your Mac crashes – or some application's feature fails to work – because of an errant extension. You'd happily consider disabling the file, if you only knew which of the dozens of suspects was to blame. This is where Conflict Catcher's Conflict Test feature comes to the rescue. The process by which Conflict Catcher finds the culprit may be semi-automatic, but it can still be time-consuming, requiring many restarts along the way. Here are some tips for speeding things up.

■ If you have a good idea which file might be causing the problem, use the Intuition feature to let Conflict Catcher in on your suspicions.

If your guess is correct, your search will take much less time.

■ If you make a mistake somewhere along the way – such as telling Conflict Catcher that the problem disappeared on a particular restart, when really it hadn't – you don't need to start all over. From the Status log in the main window, click on the step you want to revert to, and Conflict Catcher will take you back.

■ After you've determined whether a problem still exists, select Conflict Catcher and tell it your finding before selecting Restart again. This eliminates the need for Conflict Catcher to halt the next start-up to ask what you found.

Make collages



Think of the multimedia collages you could create by adding your own music and dialogue to QuickTime movies – think

Woody Allen's movie *What's Up, Tiger Lily?* Andrew Bowman of Kingstown, Saint Vincent and the Grenadines, found you can do this with QuickTime 4 Pro's QuickTime Player application. First, import an audio file into QuickTime Player – use the Import command, or drag the file to the QuickTime Player icon – to make a sound-only movie. Or, record your own audio files using the SimpleSound application. Jason Baker discovered that you can also import a track file from an audio CD – drag the track's icon to the QuickTime Player icon to import the whole track, or use QuickTime Player's Import command to select part of a track and set the audio quality. Be sure not to break any copyright laws.

Select all, or part, of the imported audio by dragging the triangular markers along the bottom of QuickTime Player's play bar, and use the Copy command. Bring up the movie to which you want to add your copied audio, select the portion where you want to insert the sound, and press ⌘-shift-option-V (the Add Scaled command). You can turn individual tracks on and off, with the Enable Tracks command, and adjust volume with QuickTime Player's Get Info command: in the movie's Info window, choose the track from the left pop-up menu, choose Volume from the right pop-up menu, and adjust the sound levels.

Move the Control Strip



I enjoy the convenience of the Control Strip. But, occasionally the Control Strip moves up the left side of the screen, usually after I play a game that changes the screen resolution. Is there any way to bring it back down without reinstalling the system software?

Alex Flax



Press the option key and drag the tab at the end of the Control Strip to move it anywhere you like on either side of the screen. You can also rearrange modules by option-dragging them left or right. For detailed information on the Control Strip, use balloon help and look up Control Strip in the on-screen Mac OS Help – while the Finder is active, choose Mac OS Help, or Help from the Help menu.

SCSI performance



I have a beige Power Mac G3, with an internal Zip drive, and an ATA hard drive. If I install an Ultra2 Wide SCSI card and an Ultra2 Wide SCSI internal hard drive, will the new drive be limited to the speed of the existing internal ATA hard drive?

Jay Moon



SCSI equipment operates independently of ATA equipment, so the speed of one does not affect the speed of the other.

The hard-drive mechanism that you install has the most effect on performance. Your choice

of SCSI adaptor card might also affect performance, but Macworld Lab found that three different Ultra2 Wide cards achieved nearly identical speeds (see "Down to the wire", August 1999). Be aware that some Ultra2 Wide cards drop down to the speed of a slower type of SCSI – Narrow, Fast Narrow, Ultra Narrow, or Ultra Wide – if you connect a slower device to the card's SCSI chain. Adaptec (0800 966 526) claims that its £345 PowerDomain 2940U2W card has a feature that maintains Ultra2 Wide performance, even when slower devices are connected, or you can circumvent the problem by using an inexpensive second SCSI card for the slower devices.

Ribbon-cable trouble



If you're having trouble with a once reliable Mac after adding a new internal SCSI device, and making sure every device has a SCSI ID number, and the SCSI chain is properly terminated, the culprit might be the SCSI ribbon cable. These cables are thin, and consequently they're more fragile than external SCSI cables. In many cases, they're folded and crammed into tight places. You can buy a new ribbon cable for around £20 from electronics stores and some computer stores. Get a replacement that is the same length, and that has the same number and type of connectors as the original. Connect one end of the cable to the computer's internal SCSI port and the other end to a SCSI device. Connectors in the middle of the cable do not have to be attached to anything.

Keith Bahjat

PowerPoint preview



To quickly preview a slide's transition in Microsoft PowerPoint, click the transition icon beneath the slide in Slide

Sorter view.

Tommy Picard

Simulate calculator memory



Although the diminutive Calculator doesn't have a memory feature, you can simulate one. If you calculate a number (for example, 308/60 = 5.133333333) and realize that you'll need to subtract it from, or divide it into, the result of a subsequent calculation, you can store the number by copying it to the Clipboard (⌘-C). Then perform your next calculation up to the point where you need the stored number (for example, 269.9/) and recall it by pasting (⌘-V). The calculator immediately computes the result (52.577922078).

Ed Hargreaves

Make bookmarks succinct



Many Web sites you bookmark have names that are either obtrusively long, or elusively non-descript. Three months after you've bookmarked Index.htm, try remembering which Web site it represents. To edit a bookmark's name in Netscape Communicator or Navigator 3.x or 4.x, display the Bookmarks window by pressing ⌘-B, select the bookmark

Get rid of excess rulers



Nisus Writer documents, especially those imported into Nisus Writer from other word-processing or desktop publishing applications, sometimes have



Eliminate paragraph rulers

To eliminate all but the first paragraph ruler in Nisus Writer, set up the Find-&Replace dialogue box as shown here and click Replace All.

excess paragraph rulers. You could laboriously select each unneeded ruler and delete it, but there is a simpler way to eliminate all but the first ruler. In the Find-&Replace dialogue box (⌘-F), switch to PowerFind mode, use the Special menu at the top of the dialogue box to specify a return character as the text to find, and as the text to replace, and click Replace All (see "Eliminate paragraph rulers"). The content of your document will not change, but all the paragraph rulers, save the first, will disappear.

Sam Lyons Elowitch

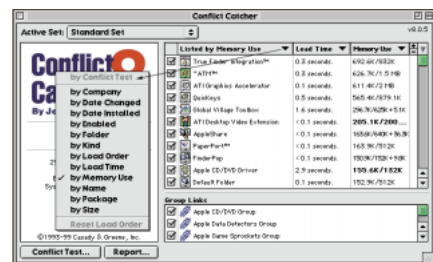
If you want to eliminate only some of the paragraph rulers, select the paragraphs with unwanted rulers, and then in the Find-&Replace dialogue box, turn on the In Selection option before clicking Replace All.

Transfer files via CD



When I finally gave up on my Performa 6200CD, I needed to move its files to my new blue G3. My savvy dealer promptly burned the contents of my 1GB hard drive onto two CDs, which I used to easily and quickly transfer all required files to my new machine. As a bonus, the CDs give me a permanent archive of more than five years' of accumulated files.

John M. Bonn



Choose your criterion

Select from Conflict Catcher's Listed By pop-up menu to sort start-up files in a variety of ways.

choose Listed By Memory Use, the biggest memory guzzlers appear at the top of the file list. If a particular offender isn't essential, you can disable the file. Memory Use also lets you know if a start-up file is using more memory than the program has

requested for it – the number will appear in boldface. There's no need to panic when this happens – I've found that it's usually safe to ignore this warning. But, if you start having unusual symptoms that could be linked to that extension, try disabling it.

Seize control at Start-Up

Suppose you're halfway through loading extensions, when you see the icon for a file you think you've disabled. There's no need to wait until start-up is over: disable the file, and then restart – simply press ⌘-R for instant restart. Then get Conflict Catcher to open before the other extensions start to load. The standard way to do this is to press and hold down the spacebar until Conflict Catcher appears.

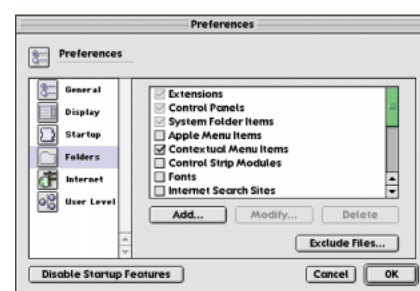
A shortcut, however, is to use the caps lock key to open Conflict Catcher. To enable

this trick, go to Conflict Catcher's Preferences and select Caps Lock Opens At Startup from the General panel.

Conflict Catcher also lets you switch start-up disks at start-up. To enable this feature, select Show Startup Menu from Conflict Catcher's General Preferences window. Then, at any start-up, get Conflict Catcher to open (by pressing caps lock) and select the desired volume from the Startup menu. When you click to continue, the Mac restarts and switches to the start-up disk you selected.

Expand Conflict Catcher's powers

Conflict Catcher's omniscience extends beyond your Extensions and Control Panels folders. It can list the contents of virtually any folder on your hard disk, including Fonts, Contextual Menu Items, and



Add folders

Use the Folders panel in Preferences to add the contents of a folder to Conflict Catcher's main window.

Photoshop Plug-ins. Just go to Conflict Catcher's Preferences, select the Folders panel, and click to enable the folders you want displayed. For example, with the Fonts folder listed, you can use Conflict

Catcher's Edit Sets command to create start-up sets, with different font collections enabled. This substitutes for the similar feature in utilities such as Adobe Type Manager and Suitcase.

If you don't find the folder you want in Conflict Catcher's Folders list, add it yourself (see "Add folders"). I used this method to add the QuickTime 4.0 Extensions folder to Conflict Catcher's listings.

Find the hidden feature

Ready for a break? Select About Conflict Catcher from the Apple menu and type play. You'll get a mini-Asteroids game (the arrow keys change your direction, the option key gives you thrust, and the control key fires your weapon). When you're done battling in space, you'll be ready to return

to battling your Mac's extensions, with Conflict Catcher acting as your ever-loyal sidekick. MW

Contributing Editor Ted Landau awaits your latest reports at his MacFixIt Web site (www.macfixit.com).

Macworld's features editor David Fanning and contributing editor Lon Poole answer readers' questions and select reader-submitted tips for this column. Send your question or tip (include your address and phone number) to David Fanning, Q&A, Macworld, 99 Gray's Inn Road, London WC1X 8UT. You can also send mail electronically, marked Q&A in the subject line, to david_fanning@macworld.co.uk or via fax to 0171 405 5308. We pay £25 for each tip published here. We cannot make personal replies, so please do not include a stamped-addressed envelope.

Peter Worlock



Apple is ending the 1990s the way it
began it – by shafting everyone in sight

Decayed decade

There are, from time to time, charges of cynicism levelled at this page and its author. “Ooh, Pete,” my critics cry, “you’re such a cynic” And it’s a charge I deny: my stock in trade here is a little healthy scepticism. There is too much of the religious about Macintosh users’ attitudes to the Mac and to Apple, and an unhealthy deification of Steve Jobs. My self-appointed task is to sprinkle a little reality on such things, a word or two of caution, a cheerful popping of hype-filled balloons. But whether cynical or sceptical, even I’m stunned by Apple’s most recent outrage.

Permit me to draw attention to the following, from the September version of this very page. The subject in question was Macworld Expo in New York, and – tongue in cheek – the prospects of skipping computer exhibitions and conferences in favour of virtual versions.

“Many of us,” I suggested, “will decide to save the money, and the time, and skip the actual attending of Expos and other industry events.” Little did I know that Steve Jobs himself would take my words to heart.

I added: “Here in the UK, if Apple screws around any further with our humble (and getting humbler) version of the Mac love-in, a small text-file and a single digital photo will be enough to convey the entire experience.”

Many of my readers were stunned by my doubts. “You cynic,” they said. “Apple has promised us the biggest, best, most exciting Macintosh extravaganza the UK has ever seen.” Put not your faith in Steve Jobs.

Since Apple announced it was withdrawing from next year’s Apple Expo I’ve heard a lot of people complaining about the company’s arrogance, and, in particular, the arrogance of Jobs. But, in truth, there’s a cancer at the heart of Apple that goes far beyond arrogance.

Apple, as a company and directly under the influence of Jobs, has all-too-often demonstrated a deep and abiding contempt for its customers, for its resellers, and for its partners in the industry.

Software developers – so vital for the success of any platform – have been ill-rewarded by Apple over the lifetime of the Mac. Naturally, in the early days, the company realized the desperate need to attract great software to the Mac OS and invested considerable time

and effort in that direction. As the Mac became established, those developers found themselves ignored and often unsupported, only to find themselves the focus of Apple’s affections through the dark days of 1997. Now the wheel has turned full circle, and, as Apple’s share price climbs, developers find themselves out in the cold.

Then there’s Motorola. Supposedly a full partner – along with Apple and IBM – in the AIM alliance to develop a full-tilt open platform based on the PowerPC, Motorola even developed its own computer-manufacturing unit to support the effort, and announced its own range of Mac-compatible systems. Until Jobs unceremoniously pulled the plug, leaving all of the clone builders without a business and Motorola with only a single outlet – Apple itself – for the PowerPC chips.

Historically, the worst hit over the years have been Apple’s reseller partners who have endured repeated about-turns by the company in its approach to putting Macs in the hands of would-be customers. First we had the AppleCentres, forced to invest huge sums in expensive locations, trained sales and support staff, and commitments to buy specific quantities of Macs. In return, they were supposed to have a secure business – until Apple decided it needed more resellers to sell more Macs, and the AppleCentres found themselves competing with PC dealers who hadn’t invested a penny.

Last, but not least, you – Apple’s long-suffering customers. Always charged over the odds for computers that were often less-than reliable, as bug-fix followed bug-fix? Remember the exploding PowerBook battery debacle? Remember promised upgrade paths that never materialized, or which were punitively expensive? Most recently, the great G4 rip-off under which Apple intended to substitute lower-powered and under-specified systems to customers who had already paid the advertised price, until Jobs was forced to climb down by an onslaught of public outrage. Now we see Apple ending the decade as it began it: shafting customers, industry partners and resellers alike.

I wish I had some biting comment to finish, but I don’t. I wish there was some piece of savage wit, but there isn’t. Apple’s latest act of petulant spite leaves me furiously, miserably speechless.

MW